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Africa	18	Asia	18	Europe	18	Latin America	18	Middle East	18	Oceania	18	USA	18
Argentina	18	Australia	18	Belgium	18	Canada	18	Denmark	18	France	18	Germany	18
Greece	18	India	18	Italy	18	Japan	18	Netherlands	18	Norway	18	Portugal	18
Spain	18	Sweden	18	Switzerland	18	Taiwan	18	Thailand	18	Turkey	18	UK	18
USA	18	West Germany	18	Yugoslavia	18								

World news Business summary

Expansion Pritzker in forecast for UK economy \$400m tobacco acquisition

The British economy is set for a strong performance this year, with inflation moderating after the summer months, according to forecasts by the Confederation of British Industry and the London Business School.

The CBI survey of manufacturing companies says that order books are still close to their strongest levels for eight years. The results indicated the economy would grow by 4 per cent this year.

This growth rate is significantly better than the Treasury was predicting in March and well ahead of the 3 per cent consensus of City of London forecasts. Page 18

Cyprus elections

Turkish Cypriots voted in parliamentary elections in a further attempt to consolidate their breakaway northern Cyprus state, recognised only by Turkey and condemned by the United Nations.

Presidential meeting

Italy's Christian Democrats, the country's dominant political party, met to choose their candidate to succeed President Sandro Pertini, a Socialist who does not intend to stand again. Former prime minister Francesco Cossiga is tipped to be the party's candidate. Page 3

Gandhi ultimatum

Indian Prime Minister Rajiv Gandhi sent a group of officials to riot-hit Gujarat state after giving the chief minister an ultimatum to stamp out violence that has killed nearly 200 people. He will lose his post if the situation is not brought under control.

S. Africa holds 15

South African police detained 15 people in connection with the activities of the outlawed African National Congress. The 10 men and five women were detained in Bhebeke, a black township near Oudtshoorn.

Canary resignation

Jerónimo Saavedra, the head of the Socialist administration of the Canary Islands, resigned after the regional parliament rejected the terms of Spain's entry into the EEC.

Greek programme

Greek Socialist Prime Minister Andreas Papandreu unveiled his programme for the next four years which showed a marked tone down of radical rhetoric. Page 3

Chinese army cut

China is to spend 1bn yuan (\$330m) resettling and re-employing the 1m troops to be cut from China's army. Page 2

Uganda attack

Anti-government guerrillas attacked Jinja, Uganda's second largest town.

Guards kill man

Yugoslav border guards shot a man running across the frontier into Austria and his body was found on Austrian soil.

London bomb found

A bomb was discovered in a crowded hotel in London just a few hundred yards from Buckingham Palace.

Bishops condemn

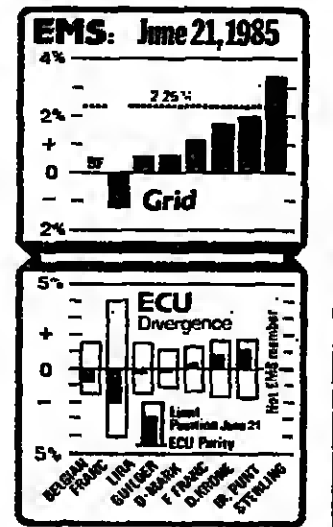
Poland's Roman Catholic bishops condemned what they said was persecution of people who held independent political views and criticised the imprisonment of a priest who opposed removal of crosses from classrooms.

Editor freed

The editor of Nigeria's Daily Times, called in by the security police on Friday, has been released. The military authorities introduced a tough press law last year setting jail terms for reports deemed to be inaccurate.

PRITZKER family of Chicago, one of the leading private investment groups in the U.S. is to pay \$400m for Conwood, a major U.S. producer of smokeless tobacco products. Page 18

EUROPEAN MONETARY SYSTEM: Currencies were mostly weaker last week in relation to central rates, the notable exception being the D-Mark. This trend developed as the U.S. dollar lost ground, prompting traders to switch into other currencies and the D-Mark attracted a greater part of the funds compared with other member currencies. The Belgian franc remained the weakest member and failed to show any improvement.



from the previous week in the face of declining domestic interest rates. It was well within its divergence limit however.

The chart shows the two constraints on European Monetary System exchange rates. The upper grid, based on the weakest currency in the system, defines the cross rate from which no currency (except the lire) may move more than 3% per cent. The lower chart gives each currency's divergence from its 'central rate' against the European Currency Unit (ECU), itself a basket of European currencies.

REAGAN administration has come out strongly against the textile and apparel quota legislation now being considered in Congress. Page 4

FRANCE has made available a FFr 2bn (\$213.4m) loan of credit to Mexico to finance equipment purchases. Page 4

PRIVATE sector companies in Britain spend an average on training of 200m for each employee, according to a Manager Services Commission Survey. Page 6

BANCA del Gottardo of Switzerland is offering 80,000 bearer shares worth around SwFr 37m (\$14.9m) for sale in the Euromarkets through a group of banks led by Swiss Bank Corporation. Page 19

BANK of Finland, the country's central bank, has banned with effect from today foreign sales of quoted bonds to shelter domestic money market from a strong influx of funds from abroad. Page 19

BEATRICE Companies, the Chicago-based food and consumer products group, suffered a 30 per cent decline in first quarter earnings to \$58m. Page 19

SHELL OIL, part of the Royal Dutch/Shell group, signed a letter of intent to buy more than 400 U.S. petrol stations from Atlantic Richfield, the U.S. oil company. Terms of the deal were not disclosed. Page 22

FIRST PHILIPPINE HOLDINGS, a Philippine group with industrial and engineering interests, plans further asset sales to pay off its debts of about 700m pesos (\$37m). Page 19

BANK BUMIPUTRA, the Malaysian bank, reported an operating loss of 105m ringgit (\$43) for the year ended December 1984. Page 22

Air India Jumbo jet crash kills 325 after mid-air 'explosion'

THERE were some suspicions late last night that the crash of an Air India Jumbo jet off the Irish coast yesterday may have been caused by a terrorist bomb. All 325 passengers and crew aboard were killed, wrote Lyndon McLean in London, Beverly Simon in Toronto, and John Elliott in New Delhi.

The aircraft was on route from Toronto to Montreal, via London, to Bombay. It came down off the south-western coast of Ireland, only eight minutes after the pilot had routinely reported to Shannon air traffic control and had given no indication of anything amiss.

The aircraft was only about 45 minutes flying time from Heathrow, where it was due to refuel and offload airline personnel. It was running nearly two hours late and should have landed in London some time before it plunged into the Atlantic.

The Canadian authorities last night were urgently trying to determine if there is a link between the Air India crash and a bomb blast in Tokyo involving baggage from a Canadian Pacific flight from Vancouver. The incidents were less than an hour apart. Two baggage handlers were killed and three injured.

The Air India Jumbo crash was the world's third worst air disaster and the worst involving an airborne 747 jet since the airliner was introduced 18 years ago. Grieving relatives besieged offices of Air India in Bombay as news of the tragedy spread.

The only time more people have been killed in the air in a single aircraft accident was in March 1974, when a Turkish Airlines DC-10 from Paris to London crashed with 345 people on board. But 383 were killed in Tenerife in 1977 when two Jumbo jets collided on the runway.

The suspicions of a terrorist attack were initially strengthened by statements from the Montreal airport security authorities that three suspect bags, detected by sniffer dogs and metal detectors, had been removed from the Air India Jumbo at Montreal before take-off. But the authorities said last night they could find no traces of guns or explosives in the cases.

Following the crash, security officers from world airlines have been called to an emergency meeting at the headquarters of the International Air Transport Association (IATA) in Montreal, probably next week.

The meeting of the IATA security advisory committee is expected to concentrate on ways of tightening the monitoring of baggage and cargo as well as passengers, "because of recent circumstances," IATA said in Geneva. IATA is concerned about a "copycat syndrome" of growing attacks on civil airliners.

The Air India Jumbo jet disaster is likely to have a serious impact on the world insurance market. The replacement value of a Boeing 747 is between \$88m and \$104m and there are likely to be substantial personal insurance claims.

The insurance risks are understood to have been spread through the world insurance market, but the London market, based on Lloyds is likely to bear part of the risk, either directly or through reinsurers.

The circumstances of the crash point strongly to a catastrophic event in the air, either an explosion or a failure of the aircraft structure. In New Delhi, Mr. Ashok Chelot, the Indian Minister of State for Civil Aviation, said: "An explosion is considered to be the cause of the Air India 747 jet crash near Ireland."

The Air India Jumbo is the 12th Boeing 747 to have been destroyed in the air or on the ground. Boeing was confident last night that its design was not to blame for the crash. The company said: "We have never had any 747 crash that has questioned the design or structure of the aircraft."

The speculation that the explosion was caused by a terrorist bomb was heightened yesterday morning only a few hours after the crash, when Air India said in Canada that it had been threatened with hijacks in recent months.

Mr. Francis Degama, the Air India regional director for the UK, told a press conference in London: "We have had over the past few months threats of hijack, and there have been threats of this nature in the past. We have had some from Indian groups, all political." However, no threats are understood to have been received in Canada in the past two weeks.

The Air India Jumbo jet, flight number AI 182, disappeared without warning from radar screens at Shannon airport at 7.15am GMT last night.

Continued on Page 18

Israel to free 31 Shia prisoners as 'goodwill gesture'

BY DAVID LENNON IN TEL AVIV, TONY WALKER IN BEIRUT AND REGINALD DALE IN WASHINGTON

ISRAEL is to release immediately 31 Lebanese Shia prisoners as a goodwill gesture towards the hijackers in Beirut. They have demanded that Israel free over 700 Shia detainees in exchange for the 40 or so American hostages taken more than a week ago from a TWA airliner.

A senior Israeli official said this was part of the overall plan gradually to release the Shias. "If the hijackers want to see this as a goodwill gesture, well let them," he added.

A spokesman for Amal, the Shia militia which has accepted responsibility for the safety of the hostages, said in Beirut it had no plans to release any of the American hostages in response to the Israeli decision.

Mr. Nahbi Berri, the leader of Amal, said later on U.S. television that he saw no connection between what he was asking for and the release of the 31 detainees.

In response to a question, he said that if he was to order the release of the 31 hostages directly under Amal control he did not know what would happen to the other Americans. He thought they would be in increased danger and could even be killed because such an action by Amal would break the link with the hijackers.

Since the hijackers' demands were issued, Israel has refused to free any of the Shias who it had taken prisoner in southern Lebanon and transferred to Aitah prison near Haifa. To do so, the Israeli Government said, would be to give in to blackmail.

However, Jerusalem has been under increasing pressure from public opinion in the U.S. to release the Shias, who were never charged with any offence and whose transfer to Israel is regarded in international law as illegal.

Washington Mr. George Shultz, the U.S. Secretary of State, stressed that there was "no connection" between the American hostages and Israel's decision to release some detainees. Israel would have to decide for itself what to do with its prisoners, Mr. Shultz said, adding that "presumably" further releases could take place.

Mr. Shimon Peres, the Israeli Prime Minister, said on American TV that the decision to release the 31 Shias had been taken a few weeks ago and had since been passing through Israel's legislative process.

Under Israeli law every detainee had the right of appeal to a special committee and if the committee recommended release, the Government had to comply. "We have had to do it," he said on the NBC programme "Meet the Press."

The Israeli cabinet yesterday discussed the latest development in the hostage affair. No details were made public but it is assumed that the cabinet approved the gesture of liberating a small number of the detainees.

Earlier M. Pierre Aubert, the Swiss Foreign Minister, passed a message from Mr. Berri to Jerusalem via the Israeli ambassador in Bern.

Israeli officials said that the Foreign Minister's telephone conversation with Ambassador Yohanan Mercaz was "vague" and that there was "nothing operational, nothing specific" in what the Foreign Minister had to say.

In Beirut, Amal officials have been considering a possible framework agreement for the release of the hostages that would allow a face-saving deal with the U.S.

Mr. Berri is understood to have discussed with a West European ambassador an arrangement that might satisfy U.S. objections to dealing directly with groups involved in the hijacking. But diplomats caution there is little or no movement towards an agreement that would end the crisis.

There are reports that a small group of passengers, including those with "Jewish-sounding names" and holders of military or diplomatic passports, who are not under direct Amal control, may have been moved out of Beirut.

The original hijackers, believed to include members of the extremist pro-Iranian Hezbollah (party of God) are understood to have these Americans in their custody as insurance against a premature deal with the U.S.

Akif Haidar, chief of Amal's politburo, has given assurances that all American hostages are well, but indicated his more moderate group would disengage itself from the affair if no progress was made.

Continued on Page 18

Nine foreign banks win entry to Japan

BY CARLA RAPAPORT IN TOKYO

JAPAN has decided to approve the applications of all nine foreign banks seeking trust banking licenses - an unexpected move designed to ease some of the trade friction between the U.S. and Japan.

Mr. Noboru Takeshita, Japan's Finance Minister, announced the move at the weekend, following talks with Mr. James Baker, the U.S. Treasury Secretary. During the last six months, Japan has maintained that it would grant only eight trust bank licenses to foreign banks as Japan has only eight trust banks itself.

Japan's trust banks, which engage in commercial banking as well as investment trust management, account for more than 65 per cent of Japan's corporate pension market. Although small by U.S. standards at just ¥14,000bn (\$56.38bn), Japan's pension market is expected to grow by 20 per cent a year over the next 10 years as the number of pensioners swells.

The nine foreign banks include six from the U.S., two from Switzerland and Barclays Bank of Britain. The U.S. banks are Morgan Guaranty Trust, Bankers Trust, Chase Manhattan, Manufacturers Hanover Trust, Citibank and Chemical Bank. The two Swiss banks are Credit Suisse and Union Bank of Switzerland.

At the same time, Mr. Takeshita told Mr. Baker that Japan is aiming to expand the Tokyo Stock Exchange's membership quota beyond the current 83 "as soon as possible."

The lack of foreign membership on the exchange is another sore point between the U.S. and Japan. The concessions on allowing all the applicants into the trust banking business represents one of the few bright spots in recent U.S.-Japan trade talks. Claims by the U.S. that Japan's semiconductor industry is selling its products in the U.S. below cost has fallen on deaf ears in Japan. At the same time, calls for reductions on tariffs on U.S. agricultural products have been effectively vetoed by the Agriculture Ministry.

If one of the nine applicants had been eliminated, it most likely would have been one of the six U.S. banks, out of fairness to the three Europeans. The nine applicants, which expect to begin operations by the end of the year, now face stiff competition from the local trust banks which enjoy strong links with their customers and a developed branch network.

Continued on Page 18

Probe into UK export backing

By Christian Tyler in London

THE BRITISH Government is reviewing its aid and trade provision (ATP) after complaints from big exporting companies that they are losing contracts in the Third World because of more generous loan subsidies by other governments.

Ministers are already preparing to extend soft credit to China to match competition from Japan, France and other West European countries supporting their domestic industries in that fast-moving market.

But the review, by a committee drawn from several government departments, is expected to range much more widely.

The aid and trade budget has an approximate ceiling of £50-£60m (\$63m-£75.5m) a year and is part of the bilateral aid programme run by the Overseas Development Administration. It is used to sweeten loan terms in order to defend British bidders against so-called "predatory financing" by rivals.

It is extended mainly to former Commonwealth countries, especially India, or others with which Britain has traditional links.

Continued on Page 18

EEC plan to close gap in technology

By Quentin Peel in Brussels

THE EUROPEAN Commission will today outline its proposals for a European research strategy to close the widening technology gap with the U.S. and Japan.

The plans are to be presented to EEC heads of government at their summit in Milan at the end of the week, as a complement to the French Government's proposals for the co-operation programme known as Eureka. Both ideas are seen as responses to the U.S. Strategic Defence Initiative (SDI), the so-called star wars programme, which Commission officials fear threatens to widen the gap between U.S. and European research in key areas of high technology.

The Commission will be putting forward its ideas to retain the research effort under the umbrella of the European Community, even if plans are drawn up to allow flexible participation in individual schemes by the different member states, sometimes excluding some members, and on other occasions including non-EEC European countries.

Mr. Jacques Delors, the Commission president, told members of the European Parliament last week that he was ready to present a draft treaty to the Milan summit, along the lines of the Euratom Treaty setting up the European Atomic Energy Community, to provide the institutional framework for the efforts.

The Commission's plan is to double spending on specifically Community research programmes over the next three years, although this is regarded with some suspicion by those member states, like

Germany, which have been growing concerned over the price of the Eureka stations at a time when his chief investments are suffering from the depressed state of the oil industry.

The main elements of the television deal were all negotiated by Mr. Murdoch, and broadcasting experts are virtually unanimous in the belief that he paid right at the top end of the price range for the stations.

An official for Mr. Murdoch said he will have no problem in funding the acquisition, which is structured as a \$650m cash offer plus the assumption of \$1.35bn in debt already held by Metromedia for a total of seven stations. One of these, WCVB-TV in Boston, is to be sold to the Hearst Corporation for \$450m,

to reduce the cash element of the deal.

Despite Mr. Murdoch's reputation for cost cutting, however, analysts remain sceptical over the ability of the other stations to generate sufficient returns to service the assumed debt, while providing a reasonable return on investment.

Other broadcasting experts believe that Mr. Murdoch was always interested in gaining sole ownership of the stations for himself. They noted that he usually makes radical changes in the companies he takes over, and that he has often commented that he needs full control of them to follow through this policy.

Mr. Murdoch made windfall gains of around \$90m in the U.S. last year when he was bought out of large shareholdings in both the Saint Regis paper company and Warner Communications, the entertainment group.

Only last week, he also raised \$55m through the sale of the Village Voice, the New York magazine. But set against these cash-raising deals, he splashed out \$250m on the acquisition of his half share in 20th Century-Fox earlier this year.

Speculation on the future of Mr. Murdoch's U.S. business now centres on the approach he will take to balancing the new portfolio of television activities against his newspaper interests.

On the television side, he is believed to be aiming to develop a fourth national television channel capable of challenging the major networks by integrating the production facilities of Fox with the six stations

Murdoch left to buy full control of Metromedia

BY TERRY DODSWORTH IN NEW YORK

MR RUPERT Murdoch, the Australian-born publisher, is to become the sole owner of the six Metromedia television stations he recently acquired in the U.S. in co-operation with Mr. Marvin Davis, the Denver oil billionaire.

In an abrupt turnaround, the two men said over the weekend that Mr. Davis was pulling out of the \$2bn deal, which they tied up just six weeks ago. The reversal will leave Mr. Murdoch to fund the acquisition alone, while giving him total control over the running of the stations.

Neither Mr. Murdoch nor Mr. Davis was available for comment on this unexpected change of heart, but in a joint statement they said that Mr. Davis intended to "concentrate on the development" of other investments, including 20th Century-Fox Film, of which he is co-owner with Mr. Murdoch.

Analysts in New York suggested that one reason for Mr. Davis's decision may have been growing concern over the price of the Metromedia stations at a time when his chief investments are suffering from the depressed state of the oil industry.

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International Companies	19, 22
World Trade	4
Britain Companies	6-8
Companies	24
Appointments	23
Arts - Reviews	15
World Guide	15
Construction	30
Crossword	34
Currencies	34
Editorial comment	16

Eurobonds	19
Financial Futures	24
Insurance	30
Letters	17
Lex	18
Lombard	17
Management	16
Money Markets	24
Stock markets - Boreses	31
Wall St.	33
London	28, 29
Technology	10
Unit Trusts	25-27
Weather	18

Technology: software buyers call the tune	10
Editorial comment: farm trade; Lloyd's future	16
Semiconductors: can Europe catch up?	16
Milan summit: more politics than business	17

Lombard: Fed aim is still a lower dollar	17
Lex: Bulls in the China shop	18
Electronics in Europe: Survey	Section III
Industrial Paints: Survey	11-14

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Sri Lanka says end in sight to Tamil crisis

By John Elliott in New Delhi

SRI LANKA hopes that by the end of this year it will have solved the claims of its minority Tamil community and, with the help of India, stopped permanently the tide of violence which has seriously damaged the island in the past two years.

"Come what may, support or opposition, before the end of this year I hope to see an end to the plague that has harmed this country and its people for several years," Mr J. R. Jayawardene, Sri Lanka's President, told a meeting of the country's main Buddhist religion yesterday.

Referring to Mr Rajiv Gandhi, Indian Prime Minister, he said: "With his help we can begin more vigorously to control terrorism in our country."

Mr Jayawardene's optimistic and tough remarks came at the end of a week during which a ceasefire was introduced following a summit meeting he had with Mr Gandhi in New Delhi three weeks ago.

Both Tamil extremists based in the southern Indian city of Madras, and the Sri Lankan security forces have avoided any violence.

Several extremist Tamil leaders were reluctant a week ago to agree to a ceasefire but were persuaded to do so by the Indian Government. They are now saying they are willing to be involved for the first time in peace talks with the Sri Lankan Government.

Mr Jayawardene is relying heavily on India to keep the extremists in line. Although it may cause him political problems in his southern state of Tamil Nadu, where Madras is the state capital, Mr Gandhi has shown himself to be more neutral on the issue of the Tamils and the Sri Lankan Sinhalese majority community than his late mother.

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Brazil leaders suffer lack of direction after first 100 days

BY ANDREW WHITLEY IN RIO DE JANEIRO

THE DEMOCRATIC Alliance Government in Brazil, headed by President Jose Sarney, marked its first 100 days in office this weekend amid a growing sense of drift and uncertainty.

Gone are the high hopes of March when the military voluntarily surrendered power after 21 years.

In place of the perhaps unrealistic expectations of radical change and restoration of eroded living standards there is a heightened awareness of the temporary, transitional nature of the Sarney Government.

A recent remark by Sr Sarney, made in frustration to a colleague—"nobody obeys me"—told volumes. Worse it was accurate.

The Congress goes its own way, concerned more with party infighting than with the legislative tasks before it; while the government remains split between ministers associated with the previous regime and those attempting to steer Brazil in a new direction.

Last Friday, in an attempt to bolster his standing with Congress, President Sarney told a group of anxious left-wing congressmen that whatever commitments the late Senator Tancredo Neves, the president who was not sworn in, may have had with the International Monetary Fund, he himself had none. "I will play tough," he is reported to have declared.

In the absence of any discernible alternative strategy the remarks rang hollow. Like it or not, the president knows he has to make heavy cuts in public spending this year—and all the while the details of this are yet to be spelled out—increasing the tax burden. If Brazil is to avoid the agonies Argentina has suffered over the past two years.

On the economic front, the civilian Government can point to some modest achievement. Price controls have helped to break inflationary expectations, bringing the annual rate down to about 25 per cent, against the earlier fears that it could have exploded this year to more than 400 per cent.

These controls have nevertheless disrupted many industrialists, already complaining about the greater degree of uncertainty now than in the last, ineffective year of the Figueredo government.

At the central bank, the orthodox monetarist policies of Sr Antonio Carlos Lemgruber appear to be working in taming money supply growth. What is lacking so far is the swinging of the axe against the hundreds of major state utilities and companies which grew so far and independent under the military.

The public reaction would probably be stronger by now if the Mangabeira affair and the recent successes of the national football team had not distracted attention from the Government's vacillation.

Argentina to pay \$320m debt interest this week

BY PETER MONTAGNON

ARGENTINA WILL this week pay a further \$320m (\$254m) in overdue interest on its foreign debt.

Legal documents on this package are to be sent to creditor banks, bringing payments up to date through February 28.

The payment has been made possible by the \$483m bridging loan granted to Argentina by the U.S. and 11 other countries last week. It is designed to protect the country from seeing its debt downgraded to "value-impaired" by the U.S. authorities, a move which would force U.S. banks to set up expensive loan-loss provisions.

A committee of U.S. bank regulators responsible for monitoring foreign countries' debts decided at a meeting last week to defer any further decision on Argentina until October. By then, however, President Raul Alfonsin's government should have completed a major

rescheduling package with its bank creditors.

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Peking to use \$350m for troop resettlement

By Robert Thomson in Peking

THE CHINESE Government announced yesterday that Peking will spend \$350m on the resettlement and re-employment of the 1m troops to be sent from China's army.

Chinese leaders have indicated that the country would be better served with those 1m soldiers in civilian service, and that the money eventually saved from the mass demobilisation will aid the country's economic development.

The troop cuts are also part of the leadership's strategy to streamline and modernise the People's Liberation Army, which Mr Deng Xiaoping, the Chinese leader, has called "bloated." When the reduction is complete, the PLA will have 3m troops.

Stories have already appeared in the Chinese media lauding the usefulness of recently demobilised soldiers. In Peking, former soldiers have been employed as drivers, factory workers and cooks.

In announcing the cost of resettlement, Mr Cui Nianli, Minister for Civil Affairs, said the pruning of the military's "glamour troops" which were the combined efforts of many departments.

Mr Cui's ministry will handle the resettlement of about 100,000 officers and 400,000 soldiers, while the remaining troops to be shed will be employed through the labour departments of central and provincial governments.

A concern of senior officers is that their demobilisation will lead to a loss of prestige through being given lowly civilian positions. To allay their fears, the Chinese media has reported numerous cases of senior officers taking "leading positions" in their new work units.

Two clubs for retired officers have been built in Peking, and municipal authorities have constructed a rest home for retired military men at Beidaihe, a popular beach resort.

The demobilisation was announced unexpectedly by Mr Hu Yaobang, the Chinese general-secretary, while in New Zealand on his April tour of the South Pacific.

China's national airline, CAAC, said yesterday it could not keep pace with rising demand, despite investing heavily in new planes, and would need at least two years to complete its planned reorganisation. Reuter reports from Peking.

The airline said that in the first five months of 1985 the airline had carried 60 per cent more traffic than in the same period last year due to China's tourist boom and Peking's drive to open-up the economy.

Keating flirts with fresh dangers

BY MICHAEL THOMPSON-NOEL IN SYDNEY

LIKE THE White Rabbit in Lewis Carroll's stories, Mr Paul Keating, the Australian Treasurer (finance minister), always appears in a powerful hurry.

Apart from sweeping reform of the financial system Mr Keating is best known in Australia for his avid collecting of Neapolitan clocks. "Stick to the First Empire," he once said, "and you'll never make a financial mistake. Of course, you'll never learn anything new or interesting, either."

Recently, Mr Keating has had scant time to wind them up, for he has been crisis-crossing Australia, pocket watch in hand, in an attempt to conjure up support for the most ambitious initiative of his hectic reign to date: wholesale reform of Australia's tax system.

On any analysis, the political perils inherent in the Keating tax plan are so grave that some believe it may make or break Hawke's Government.

"tax summit" of interested parties in Canberra which has already been dubbed one of the Prime Minister's sillier ideas. In theory, the summit will discuss the White Paper on tax reform published by the Government on June 4; in practice, it may well develop into an extended whining and special pleading.

This week, the brewers claimed that beer prices would rocket as a result of the proposed 12.5 per cent consumption tax (similar to VAT). Mr Keating said the claim was rubbish. But more insidious charges will ultimately be unleashed, partly because the White Paper envisages not only a switch of emphasis from direct to indirect tax, but also a war on "luxuries and perks" (fringe benefits), and on tax shelters like gold mining and film production. (Foreign

critics who faint at the occasional macho Aussie film hit obviously have not seen the tripe in which the industry now specialises).

Mr Keating will not be distracted by these charges: he is in too great a hurry. The sum of a "tax summit" he left school at 14, and joined the Labor Party that year. He entered Parliament in 1969, when he was noted for a tendency to call people "coves," and rose swiftly. He served briefly as a minister in the Whitlam Government that was sacked by the then Governor-General, Sir John Kerr in late 1975.

His reign as Treasurer has been marked by whirlwind activity floating the dollar, liberalising the financial markets, and insisting that as many as 16 foreign banks be ushered in.

I once saw him wearing a string vest, but his appearance now—dark tie, expensive suits, and very cold eyes—makes him indistinguishable from the bankers and mining barons with whom he mixes so easily. January 18 was his 41st birthday.

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DAI-ICHI KANGYO BANK
DKB ECONOMIC REPORT
June 1985: Vol. 14, No. 6

Review of Japanese economy in fiscal 1984: surging exports and recovery in consumption

Double-digit gain of exports

Japan's exports in fiscal 1984 rose 11.1 per cent from the preceding year on a dollar basis, following the 11.7 per cent gain in fiscal 1983. By destination, shipments to the U.S. and China shot up 30.1 per cent and 56.7 per cent, respectively. In contrast, exports to West Europe and Southeast Asia gained a mere 1.2 per cent and 1.8 per cent, respectively. By commodity, office equipment, telecommunications equipment and electronic parts (including semiconductors) registered remarkably high gains. Also, such consumer durables as color TVs and videocassette recorders increased considerably.

Exports were favorable if the fiscal 1984 is taken as a whole. Exports in the January-March quarter of 1985, however, fell 1.5 per cent from the same quarter of the preceding year, registering the first year-to-year decline in two years. The decrease apparently reflected the slowdown of the U.S. economy. Although such cleared exports (dollar basis) turned upward in April, recording a 2.9 per cent gain, it takes a few months more before one can judge whether the upturn will be sustainable. In view of the moderate expansion trend of the U.S. economy and continued favorable shipments to China, exports are likely to remain firm for the time being.

Eight-year high growth in production index

The mining-manufacturing production index in fiscal 1984 rose 9.9 per cent from the preceding year, registering the highest gain in eight years since fiscal 1976 (10.5 per cent). By industry, electrical and non-electrical machinery recorded big gains of 25.4 per cent and 12.2 per cent, respectively, supported by favorable exports.

In the January-March quarter, however, the index dropped a seasonally adjusted 0.7 per cent from the preceding

October-December quarter, representing the first quarterly decline in nine quarters. The quarter-to-quarter fall is attributed mainly to the following factors:

—A decrease in exports caused a 3.3 per cent quarterly decline in production of capital goods.

—Production of construction goods dropped 2.8 per cent. Actually, the Ministry of International Trade and Industry's production prediction index of the manufacturing industry predicts a 3.7 per cent and 2.2 per cent gain in April and May, respectively.

Along with exports, private plant and equipment investment has been a driving force for Japan's economic growth. According to the Economic Planning Agency's corporate business trend survey of companies with paid-up capital of more than ¥100 million, plant and equipment investment in fiscal 1984 jumped up an estimated 12.3 per cent from the preceding year. By industry, export-related industries, such as electrical machinery and non-electrical machinery recorded sharp gains — 46.6 per cent and 24.5 per cent, respectively.

The survey report predicts a seasonally-adjusted 4.9 per cent gain in capital spending in the April-September half-year period. This indicates that plant and equipment investment is likely to remain strong.

Recovery in personal consumption spending

Personal consumption spending, which had zigzagged for a while, shows signs of recovery. Department store sales in the January-March quarter of 1985 rose 4.8 per cent from a year before, exceeding the 3.8 per cent gain in the October-December quarter. In view of

the fact that the year 1984 had an additional day in February because of leap year, the first-quarter figure appears larger than it actually was. This indicates a strong recovery in department sales.

The average outstanding balance of Bank of Japan note issue increased 7.0 per cent in the January-March quarter from a year earlier. The 7.0 per cent gain compares to a 4 to 5 per cent increase in the second half of 1984. The increase in the Bank of Japan note issue continued to be relatively strong in April, recording a 6.2 per cent rise. Also, department store sales in Tokyo gained 6.0 per cent in April.

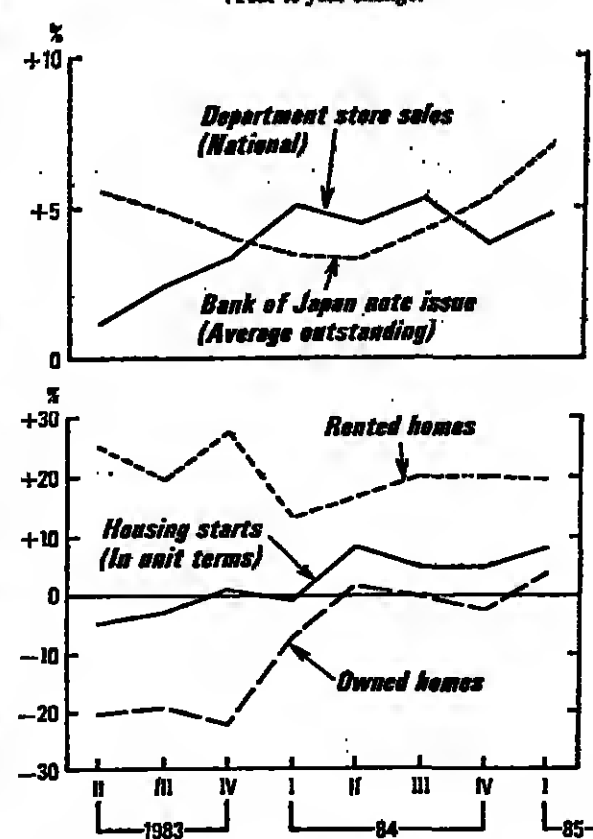
These indicators show that personal consumption spending is now on a recovery trend. The upturn seems to gain momentum in tandem with the wage raise in the "shunto" spring labor offensive which reached around 5 per cent (4.5 per cent in 1984) and the employment situation is better than it was.

Housing investment also has been on a steady recovery path. Housing starts in fiscal 1984 rose 6.4 per cent to exceed the 1.3 million-home level for the first time in four years since fiscal 1980. Housing starts had been on an upturn because of the pickup in rental houses. In the January-March quarter, construction of owned homes also turned upward and increased 3.5 per cent from a year earlier.

The recovery in housing investment mirrors stable land and construction material prices and easy money. As these factors are likely to remain as they are, housing investment will maintain its recovery trend.

Stable prices and easy money

Prices continued to be stable in fiscal 1984. Wholesale prices rose a paltry 0.2 per cent in fiscal 1984, although the yen weakened 3.3 per cent against the U.S. dollar. This is attributable to the Japanese economy's

Consumption-Related Indicators
(Year-to-year change)

Sources: Ministry of International Trade and Industry, Bank of Japan and Ministry of Construction.

excess supply capacity and poor quotations of primary commodities.

Consumer prices stayed calm throughout fiscal 1984, rising only 1.2 per cent.

Under the stable prices, easy money has been sustained. The central bank set the increase in loans to banks (window restriction) in the April-June quarter at levels that commercial banks requested. In the case of city banks, the year-to-year increase rate is as high as 35.5 per cent.

The increase rate of the broadly-defined money supply (M2 plus certificates of deposit) is projected to be around 8 per cent in the April-June quarter, almost the same level as the 7.9 per cent in the January-March quarter. These indicate continued easy money.

Expanded current account surplus

In fiscal 1984, Japan ran a

\$45.6 billion surplus in its trade account as exports surged while imports edged up moderately. The trade gap far exceeded the past record of \$34.5 billion registered in fiscal 1983. The invisible trade account narrowed its deficits as returns from overseas investments increased. The current account balance registered a \$7 billion surplus in fiscal 1984, lopping the \$24.2 billion deficit of fiscal 1983.

On the other hand, the deficit in the long-term capital balance expanded to \$64.4 billion in fiscal 1984 from \$20.8 billion in the preceding year as capital massively flew out from Japan to the U.S. for higher interest rates.

The basic balance — current account and long-term capital balances combined — turned to the red in fiscal 1984. The deficit came to \$17.4 billion, second largest on record after the \$24.5 billion registered in fiscal 1979.

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The next DKB monthly report will appear July 24.



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OVERSEAS NEWS

NZ dollar continues to make sharp gains

By Dai Hayward in Wellington

THE NEW ZEALAND dollar has again proved its strength in the world currency markets rising strongly last week against sterling as well as the U.S. and Australian dollars.

In a dramatic mid-week move it jumped a full two cents in value against the U.S. dollar — the second time in the past two months it has risen two cents in 24 hours.

Foreign exchange dealers and financial operators who predicted a sharp decline in the value of the NZ dollar after it was floated in March have been proved wrong. Now some are confidently predicting it will hold firm and possibly even rise higher.

The NZ dollar improved against sterling from 0.3567 to 0.3613 on Thursday the day of its major upward move.

It rose to U.S.\$0.47 — just fractionally below its pre-float level of \$0.473. This is well above the \$0.42 level which many in the currency markets were predicting would be the level after the March float.

On Thursday it also rose more than one cent against the Australian dollar to reach A\$0.707.

The Kiwi dollar has gained against European currencies which have themselves been rising. It rose against the German mark from 1.39 to 1.41 on Thursday and on Friday was DM 1.43 and £0.365.

When the dollar was floated in March the NZ Reserve Bank index was 62.7. On Thursday the index touched 63.4. It slipped back to 63.3 at the close on Friday but this was still above the pre-float level.

Initially it was said speculators and exporters who had moved funds offshore anticipating a drop in the dollar had to bring these back and this helped to maintain its value. It was suggested that when this demand was satisfied the NZ dollar would slide down.

This did not happen and now other reasons for the firmness of the NZ dollar are being suggested. The declines in the U.S. and Australian dollars has helped the NZ dollar.

The NZ budget reassured overseas operators the NZ economy is improving with a substantial reduction in the government deficit.

Papandreou tones down Left rhetoric in policy speech

By ANDRIANA IERODIACONOU in Athens

GREECE'S SOCIALIST Prime Minister unveiled on Saturday a policy programme for the next four years, which showed a marked toning down of radical Left rhetoric, without however abandoning a commitment to social welfare oriented economics and a foreign policy of pacifist neutralism.

Dr Andreas Papandreou, who told the parliament that the programme represented a blend of his party's 1974 founding charter and the "experience of four years in government" kept his options open on the critical issue of the future of the four U.S. military bases in Greece.

He said his Government was "bound towards the parliament and the people to abide by the terms and the timetable of the agreement on the bases." This was judged by diplomats to be a Delphic statement given that the terms of the five-year base agreement signed in 1983 include a termination option, the exercise of which however is not obligatory.

Dr Papandreou warned that the policy of boycotting exercises in the Aegean and deadlocked projects such as the setting up of a new Alliance command headquarters in Greece, would remain on the table as long as the Greek-Turkish dispute which underlined them was not resolved by NATO in such a way as to respect Greek "sovereign rights".

Dr Papandreou said that Athens would continue to link the start of a dialogue with

Turkey, to the withdrawal of Turkish occupation troops from North Cyprus, as well as on Ankara's willingness to abide by the legal status quo in the Aegean.

The clearest shift in foreign policy compared to 1981, when the Socialists came to power, was on Greek-European Community relations. Then the Socialists pledged to pull-out pending a referendum. Now Dr Papandreou has indicated that Greece is in the Community to stay, while continuing to fight for economic convergence between poor and rich member states.

On the economic front, the Prime Minister gave no indication that a French Socialist style U-turn in favour of belt tightening was in the offing. He stressed that his government's approach to tackling inflation, which has been in double figures since the early 1980s, and high current account deficit must be gradual, in order to avoid "throwing the burdens of adjustment one-sidedly on to the workers".

However, Dr Papandreou warned that Greeks must strive for higher productivity in all sectors.

He hinted that an increase in taxation might be inevitable, and allowed the government some room for manoeuvre on wage policy. He promised that some kind of index-linking system would continue to be followed, but said that criteria such as productivity and foreign competitiveness must be taken into account in setting wage policy.

Cossiga expected to win presidency

By James Buxton in Rome

ITALY'S Parliament this evening meets to elect a new President of the Republic. He is widely expected to be Sig. Francesco Cossiga, the Christian Democrat president of the Senate.

Some commentators are saying that the successor to 86-year-old Sig. Sandro Pertini could be elected on the first ballot — something that has not happened in presidential elections since the first one in 1948.

Last night Christian Democrat MPs were meeting and were expected to formalise their choice of Sig. Cossiga as candidate.

Already Sig. Cossiga De Mita, the party leader, has received indications both from the other parties of the ruling coalition — the Socialists, Republicans, Social Democrats and Liberals — and from the Communists, that they are prepared to approve the choice of Sig. Cossiga.

A last-minute hitch cannot be ruled out however, and it is not certain that Sig. Cossiga will be elected on the first ballot. For the first three ballots a two-thirds majority of MPs from both Houses of Parliament plus representatives of the region is needed and then only an absolute majority is required.

Canaries chief resignation

LAS PALMAS, Canary Islands — The head of the Socialist Government of the Canary Islands has resigned after opposition groups rejected the terms of Spain's entry into the EEC, officials said yesterday.

Sr Jeronimo Saavedra, signed after the regional parliament voted 30-27 against the accession treaty signed in Madrid on June 12 on the grounds that it would seriously damage the islands' economy.

Tens of thousands of farmers in the Canary Islands, which are part of Spain, have protested in recent months, saying their livelihoods would be harmed under the conditions negotiated for the Canaries.

The deal allows the islands to preserve their free port status and other fiscal privileges but treats their rich market produce as if it came from a non-Community country.

Greens fail to heal rift in accord with Social Democrats

By PETER BRUCE in Bonn

WEST GERMANY's radical Greens Party, struggling to recapture public favour after heavy defeats in two important state elections this year, failed yesterday to heal a fundamental split over whether the party should commit itself to a coalition with the opposition Social Democrats (SPD) if the two groups were able to form the next government.

Some 700 Green delegates called to an extraordinary congress in Hagen, south of Dortmund, at the weekend, rejected motions calling for a commitment to coalition with the SPD and another rejecting co-operation in forming such an alliance.

Failure to clarify the party's position could threaten its chances in further state elections next year and the federal poll in 1987. The Greens have a small representation in parliament and their only real hope of winning cabinet seats would be as junior partners in an SPD government. The SPD, however, has started many leading Greens not only by thrashing them in the recent Saarland and North Rhine Westphalia elections, but by also successfully usurping a number of popular Green platforms.

The Hagen conference, designed to settle the feuding within the party over SPD co-operation in the wake of the two defeats, achieved little more than the compromise reached by the party at its last federal congress in Hamburg last December when its political stock appeared to be riding high. Delegates

then decided to keep the coalition question open.

Yesterday's debate ended with two resolutions being adopted, one which called on the Greens not to voluntarily isolate themselves in parliamentary opposition and another insisting that they co-operate with the SPD only when that party makes significant changes to its economic and defence platforms. The SPD, however, is enjoying a strong recovery in public support at the moment, and is unlikely to want to bend to the Green demands.

The defeat suffered by the Greens in North Rhine Westphalia last month has been particularly difficult to swallow. The state is the most populous in the country and also the most heavily industrialised which should have made it ideal territory for the Greens' environmentalist policies. Instead, they failed to win a place in the state parliament.

The defeat significantly hardened divisions in the party, with pragmatists, the so-called "realos", arguing even louder than usual that the Greens need to decide whether they seriously want to enter government or remain a pressure group. They have been accused by party purists, "fundamentalos", of wanting to sell out to the SPD.

The results of the weekend conference in Hagen were greeted enthusiastically by the purists, who argued that the compromise resolutions give the party time to heal divisions before the federal election.

Pope blocks closer Polish link

By OUR ROME CORRESPONDENT

THE POPE has allowed his fellow Pole Mr. Stefan Olszowski, the Foreign Minister, to feel the weight of his disapproval for the Polish Government's domestic policies.

A meeting between the two men in Rome on Saturday was widely reported to have been cool.

The Pope is understood to have made clear that he has no intention at this stage of acceding to Polish requests to raise the status of Poland's ties with the Vatican to those of full diplomatic relations.

Pope John Paul is understood to have indicated his dismay at the recent sentences given to the three

Solidarity activists in Gdansk, and to the decision to try seven more Solidarity members in Katowice.

Behind the coolness is the Vatican's disapproval of the way the Government of General Jaruzelski treats the Catholic Church in Poland. A particular point at issue is the question of who — the Church or the Government — should decide how to distribute funds collected by Western churches for the benefit of Polish farmers.

To show his disapproval of the Gdansk sentences Sig. Bettino Craxi, the Italian Prime Minister, refused to meet Mr. Olszowski.



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What to Buy for Business Magazine, P53 Cellular Report — 3rd June 1985

WORLD TRADE NEWS

Paris signs FFr 2bn line of credit deal with Mexico

BY DAVID HOUSEGO IN PARIS

FRANCE has made available a FFr 2bn (£168m) line of credit to Mexico to finance equipment purchases.

A protocol to this effect was signed during the visit to Paris last week of President Miguel de la Madrid of Mexico. Nine letters of intent with French groups covering major contracts were signed at the same time.

Among the potential contracts are a FFr 381m agreement for the extension of the Mexico City underground, a FFr 700m purchase of two bulk containers and a FFr 400m deal for two tug boats.

The agreements come at a time when France's trade deficit with Mexico has widened because increased French purchases of crude oil have not

been offset by larger Mexican equipment purchases from France.

France imported FFr 7.2bn goods from Mexico last year (of which 80 per cent were oil) while exporting FFr 2.4bn. This was substantially below the FFr 3.6bn France exported in 1983.

M Hector Hernandez, the Mexican Minister of Commerce indicated to Mme Edith Cresson, the French Industry Minister, that Mexico wanted to reduce the imbalance.

Among other major negotiations going on are talks with CIT-Alcatel over the modernisation of the Mexican telephone network and with Airbus-Industrie over the possible purchase of Airbus.

India expects oil export earnings to drop sharply

BY JOHN ELLIOTT IN NEW DELHI

INDIA's oil exports are expected to decline sharply from Rs18.2bn (£1.2bn) to Rs4.7bn in the current financial year 1985-86 because of increased oil refinery capacity being introduced in the country to process oil from the Bombay High.

The country's oil refining capacity has fallen behind the rapid expansion of its domestic oil production, which totalled 30m tonnes last year, and for the past four years some unrefined oil has had to be exported. Last year the U.S. took most of the exports, totalling some 7m tonnes.

Refinery capacity is expected to increase from about 35m tonnes last year to 42.1m tonnes this year, causing the cut in exports.

Despite this drop in export earnings, however, the Indian

Government has set a target for the country's total exports to grow by 3.8 per cent from Rs113bn last year to Rs117.4bn in the current year. Mr Vishwanath Pratap Singh, Finance and Commerce Minister, announced at the weekend.

Non-oil exports will have to grow by 18.8 per cent above last year's total of Rs 94bn to achieve this target.

Last Monday, India announced that it had reduced its trade gap in 1984-85 to Rs 51.5bn from Rs 59.5bn in 1983-84.

Mr Singh also announced new initiatives to boost exports of computer software, engineering goods, agricultural products including spices and tobacco, and leather footwear. Increased sales of tea to the Middle East were also planned.

Reagan opposes textile quota Bill

By Nancy Dunne in Washington

THE REAGAN Administration has come out strongly in opposition to the popular textile and apparel quota legislation being considered in Congress.

In a letter to all members of commerce, the secretary of state, commerce, treasury and labour and the acting U.S. Trade Representative called for the defeat of the measure.

The legislation is not necessary to maintain "A strong, viable domestic textile and apparel industry," they said.

"Indeed, the level of protection contemplated in the Bill is not only contrary to the free-market principles which have made our economy the envy of the world, but would adversely affect every citizen in the U.S. because of higher consumer costs."

The legislation already has the backing of a majority of House and Senate members, and unless the Administration can get the Bill stalled in committee, it may well be passed.

Some Senators are considering the possibility of attaching it to legislation vital to the President to avoid a veto.

Under the legislation, total U.S. textile imports would be cut by almost 27 per cent, according to a report prepared by the Commerce Department. The study shows that textile shipments from the "big five" exporters (Hong Kong, Korea, Taiwan, China and Japan) would shrink by 37 per cent.

The Bill is designed to push import levels back to where they would have been had they not risen so much last year.

The study found that Brazilian textile imports would be cut by 80.5 per cent, China's would decline by 59.1 per cent.

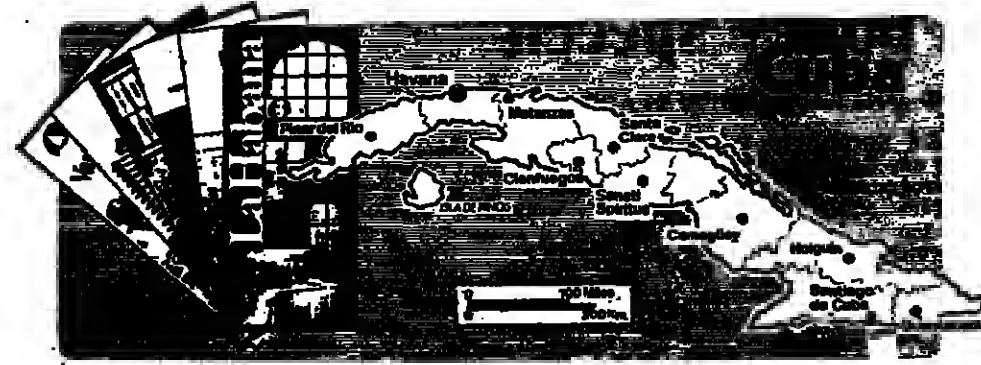
However, textile imports could rise by 230 per cent from Chile, 21.7 per cent from Poland, 21.7 per cent from Switzerland.

UK asks Taiwan to cut wool import tariffs

Britain has asked Taiwan to cut its import tariffs on machinery and wool to redress the trade imbalance between the two countries, the Taiwan Finance Ministry said, Reuters reports from Taipei.

Frank Gray recently in Havana reports on plans to double hotel capacity

Cuba sets out to lure the foreign tourist



CUBA's tourism industry is embarking on a five-year programme to more than double the country's accommodations in anticipation of even greater foreign currency earnings than were scored in the first half of the decade.

Dr Jesus Jimenez, vice-president of the Instituto Nacional de Turismo (Intur), the state tourism organisation, said that hard currency earnings in the sector last year were the best of the past 10 years, when Cuba began seriously to encourage the revival of foreign tourism.

Hard currency earnings were estimated at \$100m, based on more than 200,000 foreigners visiting the country.

Dr Jimenez said about 500m pesos (\$45m) is to be spent in the five-year period to boost accommodation from 17,000 beds to 37,000. Varadero Beach, 85 miles east of Havana, is the traditional centre for tourism. It will be the key beneficiary, but more effort will be put into sprucing up Havana's big hotels.

In Havana, little has been done to improve accommodation since Fidel Castro came to power in 1959; as a consequence, such once-grand hotels as the Nacional, Habana Libre, Capri, Riviera, Desvillie, and St John's will figure in the face-lift programme.

However, because of the numbers now coming into the country, Intur will also shift some resources to boost tourism capacity beyond the main

centres in such places as Holguin, Santa Lucia, Pinar del Rio, Matanzas and the Isla de Juventud off the south coast.

Foreign contractors who are anxiously watching the Cuban tourist development plan, will be disappointed as few big projects are likely to be let to non-Cuban concerns. There have been exceptions: an Argentine group recently completed a turnkey contract for accommodation at Varadero beach, but much of the work will be done by Cuba's Unica building company.

The sector is dominated by tourists travelling on inclusive tour packages, marketed abroad by Cubatur, the overseas arm of Intur. In order to ease some of the tight regulations connected with travel in Comecon countries, Cuba has eliminated the need for tourist visas, and now simple travel cars are more easily obtained.

An important sector is business travel, which at the moment is only in the thousands, but is bound to rise given Cuba's commitment to do more business with the West in an effort to modernise an economy still without access to U.S. equipment and know-how.

The great unknown quantity, however, is the expatriate Cuban Americans, who have been flooding in at 1,000 per week this year. But this form of travel, facilitated only by the special political dispensation in the U.S. and Cuba, is threatened with suspension following Havana's protest at Washington's recent decision to inaugurate what it says are propaganda radio broadcasts from Florida.

Of the 206,000 visitors entering the country, some 168,000 originated in Western countries. They were dominated by

Canada (45,000), Mexico (25,000), Spain (22,000), West Germany (20,000) and Italy (20,000) as well as increasing numbers of visitors from other European nations such as France. The Comecon bloc, particularly East Germany, provided 38,000 visitors.

In Europe, Cuba's historic Spanish connection is vital to its long-term tourist development programme. Iberia Airlines of Spain is Cubatur's primary marketing arm on the Continent and because of its extensive intra-European and Latin American route networks, is the main conduit for European visitors.

The company enjoys a special relationship with Cuba because it was one of the few Western airlines to maintain air links into Havana during the revolution's darkest days in the 1960s, when tourism came to a virtual

standstill. Similar exclusivity is enjoyed by Air Canada, which overcame U.S. objections 10 years ago and started regular operations into Varadero, overflying U.S. airspace. Another main connection is Aeromexico, which has always maintained a busy link with Cuba.

Cubana de Aviacion, the Cuban national airline, does not object to the competitive strength of its competitors. It is bound to operate "political" routes to Luanda and Maputo in southern Africa as well as to Prague and East Berlin. It has built up commercial services to Paris, Madrid, Montreal, Lima and throughout the Caribbean basin.

However, its route development plans are limited by its equipment, basically 26-narrow bodied Soviet-built aircraft, says Sr Rolando Bone, the company's commercial director. It is long sought to acquire used U.S.-built aircraft, such as Boeing 707s, but has been unable to do so because of U.S. laws on high-technology sales.

Cubana, with the opening of the Canadian market, was able to acquire used DC-8s from Air Canada, but one was destroyed in a terrorist explosion and the other has since been retired.

Sr Bone says Cubana is still in the market for U.S. equipment, but is the meantime it is content to leave the bulk of support for Cuba's tourism industry to foreign airlines.

Japan rejects calls for foodstuff tariff reforms

BY CARLA RAPOPORT IN TOKYO

JAPAN'S Agriculture Ministry has rejected calls for significant reform of Japan's tariffs on agricultural products.

In a statement at the weekend, the ministry proposed that tariffs be cut on about 40 per cent of those foodstuffs which are taxed, including items primarily imported from Southeast Asian countries. The Ministry said it would oppose tax cuts on those items important to Europe and the U.S., such as beef, cheese, chocolate, wheat, butter, oranges and pork.

The Ministry's position will be considered tomorrow by Premier Yasuhiro Nakasone, his cabinet and leading Japanese politicians. The meeting is expected to approve a number of tariff cuts as a first step towards the formation of an Action programme on boosting Japan's imports, expected by the end of next month.

Agriculture Ministry officials have conceded that their stance will not be popular with their main trading partners, particularly the U.S., which has been pressing for a reduction in taxes on beef, oranges and wheat in particular.

Even so, the Ministry believes that Japan's huge trade surplus would not be reduced substantially if all the tariffs were lifted. As a result, they favour a continuation of the current regime.

Those items on which the Ministry has recommended tariff cuts include boned chicken, mainly imported from Thailand, palm oil (from Malaysia) and bananas (from the Philippines). Seasonal tariffs on bananas will not be removed, however.

These recommendations are well-timed, as the second economic ministers' conference between Japan and the Association of Southeast Asian Nations (ASEAN) is to be held in Tokyo this week.

Tokyo buys two satellites from Hughes offshoot

BY CARLA RAPOPORT IN TOKYO

Japan Communications Satellite (JCS) has ordered two satellites worth \$300m (£228m), including launching costs, from Hughes Communications of Tokyo.

JCS, a joint venture of G. Itoh, Mitsui and Hughes, a subsidiary of Hughes Aircraft, has received approval from the Posts and Telecommunications Ministry to offer basic communications services, G. Itoh said.

Japan's telecommunications sector was opened to private firms last April 1.

The company will launch a satellite in December 1987 and the second in April 1988 and will start communications services in February 1988, the company said.

U.S. officials said the U.S. would also like Nippon Telegraph and Telephone (NTT), the former state monopoly, to buy a U.S.-made satellite to help reduce the U.S. trade deficit with Japan.

SHIPPING REPORT Little activity in tanker and dry cargo markets

BY ANDREW FISHER, SHIPPING CORRESPONDENT

IT WAS not a week to set hearts racing on the tanker and dry cargo market—despite their conditioning to long periods of weak rates and sluggish trading, some shipbrokers described last week as one of the quietest ever.

This was especially true of the tanker sector, where the dull conditions of the previous week persisted. Mr E. A. Gibson, the London broker, hoped the July 5 Opec meeting would help the market by bringing some agreement on oil prices and quotas.

Ships in the Gulf, found it harder to obtain cargoes, Mr Gibson said. One ULCC (ultra large crude carrier of 300,000 deadweight tonnes) was fixed from Saudi Arabia to the Red Sea, with three months storage and an option on three more.

The rate was estimated at some \$6,000 a day. A 65,000 ton cargo was arranged from Kuwait to the UK and the Continent at Worldscale 47.5. Indonesia was more active, but West Africa and the Mediterranean were quiet.

Bearing out the continued poor state of tanker markets, Lloyd's Monthly List of Laid Up Vessels showed there were 334 such vessels of 53.6m tonnes laid up on June 1, slightly more than the previous month.

In the dry cargo sector, Denholm Coates said: "It was another sombre week." Despite a small increase in Atlantic activity, rates eased. There were 50 cent drops in grain rates from the U.S. Gulf to Europe.

Soviet Union chartering activity for grain has abated. But there were reports of Soviet purchases of up to 14 handy-size (20,000-45,000 dwt) bulk carriers at \$4.7m each.

World Economic Indicators

	May '85	April '85	March '85	May '84	% change over previous year
U.S.A.	130.1	129.8	129.2	125.5	3.7
U.K.	142.4	141.3	138.9	133.1	7.0
W. Germany	121.1	120.9	120.5	118.1	2.5
France	156.9	155.8	154.7	147.3	4.5
Italy	188.3	186.6	185.1	171.9	9.5
Netherlands	122.4	121.9	121.0	119.4	2.5
Belgium	140.3	139.8	138.7	133.1	5.4
Japan	113.9	113.4	112.9	111.9	1.8

Source: (except UK, U.S.): Eurostat.



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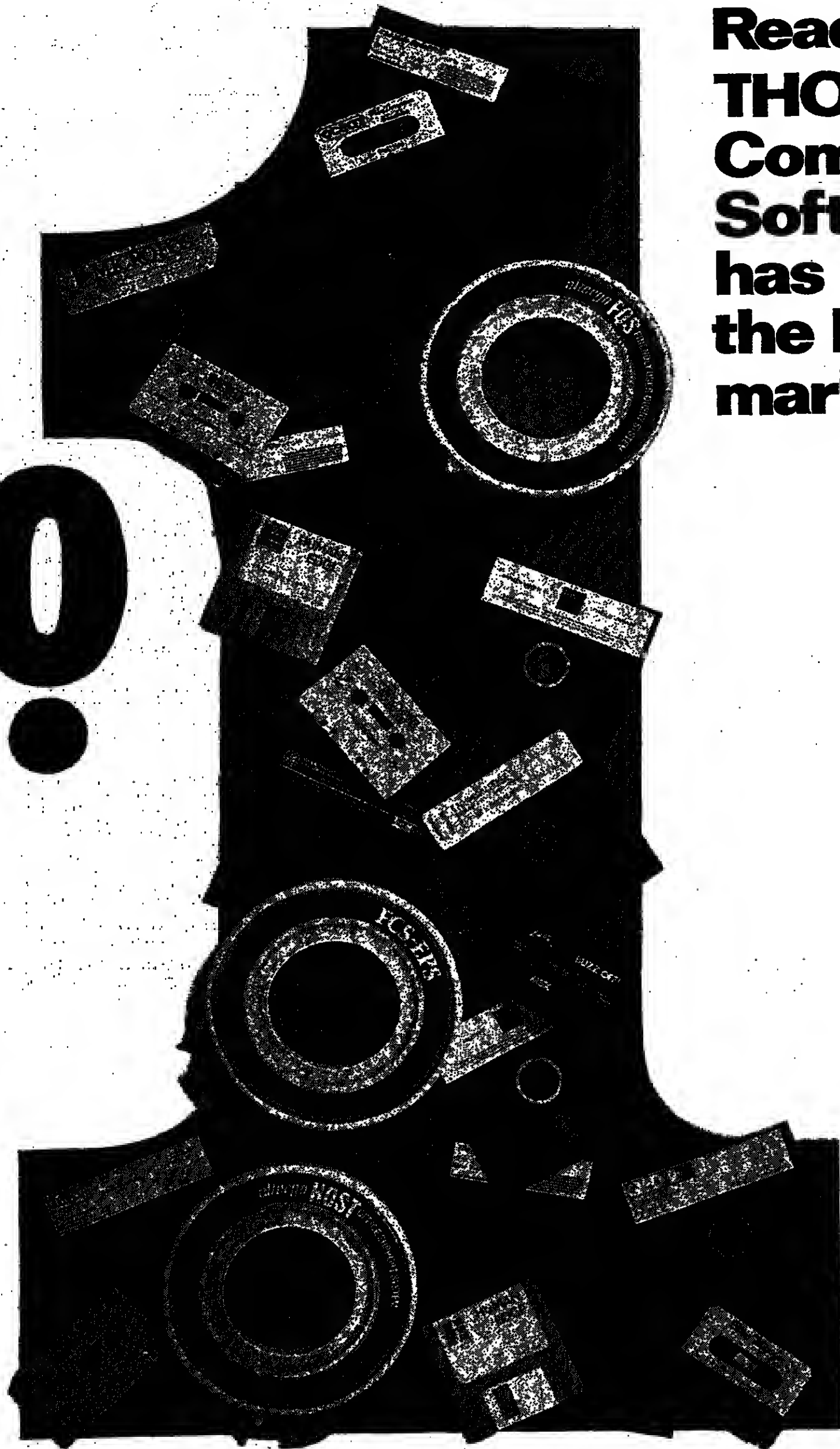
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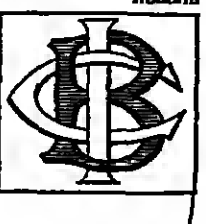


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UK NEWS

Transport union softens defiance of labour laws

BY BRIAN GROOM AND ARTHUR SMITH

BRITAIN'S largest trade union, the left-led Transport and General Workers' Union (TGWU), has started taking a more flexible line towards the Government's labour laws even before its biennial conference decides this week whether to modify its formal policy of defiance.

The conference opens today in Bournemouth, on the south coast of England. Mr Moss Evans, general secretary, declined yesterday to predict which way delegates would decide, but added: "I have no doubt at all that they will take a pragmatic line."

Signs of pragmatism are already emerging. They include:

● A statement by Mr Evans yesterday that the union is likely to defend itself in court against a damages claim from Austin Rover arising from last November's strike.

● A decision by the TGWU's London bus committee to hold a secret workplace ballot next Tuesday before taking industrial action on pay and productivity.

● The likelihood that a ballot will be held if, as is threatened, Ford's assembly line workers take action over a pay grievance next winter.

● References made by Mr Evans yesterday to a ballot which was held before the current national pay strike at Golden Wonder, and another held at Pirelli on retaining union membership agreements.

The union is strenuous in claiming that all this is happening within current policies and rules. "If you look at our rule book there is nothing preventing any of our members from having a ballot," Mr Evans said. "We do not have to change our rules to meet the requirements of this legislation."



Moss Evans: 'nothing to prevent a ballot'

Mr Evans said the union would defend itself in court. Its decision not to do so before when faced with contempt proceedings for disobeying an injunction in the Austin Rover case - for refusing to withdraw a strike call until a ballot was held - was taken because counsel said the only defence was to repudiate the actions of union officials. He said the union had not been prepared to do this. That led to a £200,000 fine.

"Defending ourselves against a claim for damages is a different ballgame altogether," Mr Evans said. "We would defend ourselves because we believe we were more damaged than Austin Rover were."

It is understood, however, that the TGWU is the only one of eight unions not to have so far submitted a statement of defence, in response to Austin Rover's statement of

claim for damages as a result of last November's strike.

The company, the volume cars subsidiary of state-owned BL, sent a letter by hand to the union's headquarters last Friday giving it a week to do so. Otherwise, Austin Rover would seek a "default judgment" from the office of the High Court, making the union technically guilty when the full hearing takes place.

● The National Union of Railwaymen (NUR) should review its policy of opposition to the pre-strike ballot requirements of the 1984 Trade Union Act, Mr Jimmy Knapp, its general secretary, said yesterday, David Brindle writes.

His comments came on the eve of the NUR's annual conference in Ayr, Scotland, where it will discuss a branch resolution calling on the union's national executive to "seriously consider" pre-strike votes.

Mr Knapp would not say whether he would speak in support of the resolution. He did say that the policy could be reviewed with, in his view, no change in the NUR's basic opposition to the Government's employment laws.

One factor in Mr Knapp's thinking is undoubtedly the failure of last month's strike among NUR members on London Underground, called without a ballot. He pointedly said yesterday that the object of calling strikes was to win them.

Another factor is British Rail's demand for £200,000 damages from the NUR and the train drivers' union Aslef, arising from the 24-hour strike staged on parts of the Eastern and Midland railway regions on January 17.

Lack of training revealed in survey

By Alan Pike, Industrial Correspondent

PRIVATE sector companies in Britain spend an average of £200 per employee a year - only 0.15 per cent of turnover - on training, according to a survey undertaken for the Manpower Services Commission (MSC).

The survey reveals a giant gap between employers' purported attitudes towards training and their actual investment in it.

A total of 89 per cent of employers interviewed in the survey said they regarded training as an essential investment. Almost the same proportion believed training was necessary to maximise productivity and profits, and 95 per cent said they recognised that their employees needed to learn new skills.

Yet evidence from the same employers indicates that only about £200 a year is being spent on training by private sector companies with 25 or more employees - a fraction of expenditure in countries like West Germany, the U.S. and Japan.

The survey found that 24 per cent of establishments had provided no training of any kind during the previous 12 months.

Almost all types of relatively informal on-the-job instruction have been included in the survey's definition of training. Off-the-job training amounted to an average of 5.5 days a year for those employees who received any training during the 12 months prior to the survey, or 1.9 days spread across the private sector workforce as a whole.

This, says the survey report, compares with the "2.5 days per year" which, it has been calculated, British managers spend on business lunches above a normal lunch break.

The survey, carried out by IFF Research, was commissioned by the MSC as part of its adult training campaign. Interviews covered a sample of both manufacturing and service sector companies with a total of 330,000 employees.

Mr Bryan Nicholson, MSC chairman, said the lack of investment in training illustrated by the survey was "bordering on the foolhardy". But the findings also demonstrated a definite link between business success and training performance.

Racing paper responds to challenge

BY TERRY POVEY

PLANS to revitalise The Sporting Life newspaper and cut costs have been announced by Mr Robert Maxwell, chairman of the Mirror Newspaper Group which owns it.

The move follows closely on the announcement of the launch of a competitor for the 126-year-old horseracing paper. The Racing Post is due to appear in early 1986 and is being financed by the four Maktoum brothers, members of the Dubai royal family, who are leading racehorse owners.

For both The Sporting Life and

its challenger the key problem is the limited size of the readership. Both papers will be fighting over a market not thought to be much bigger than The Sporting Life's existing circulation of 75,000.

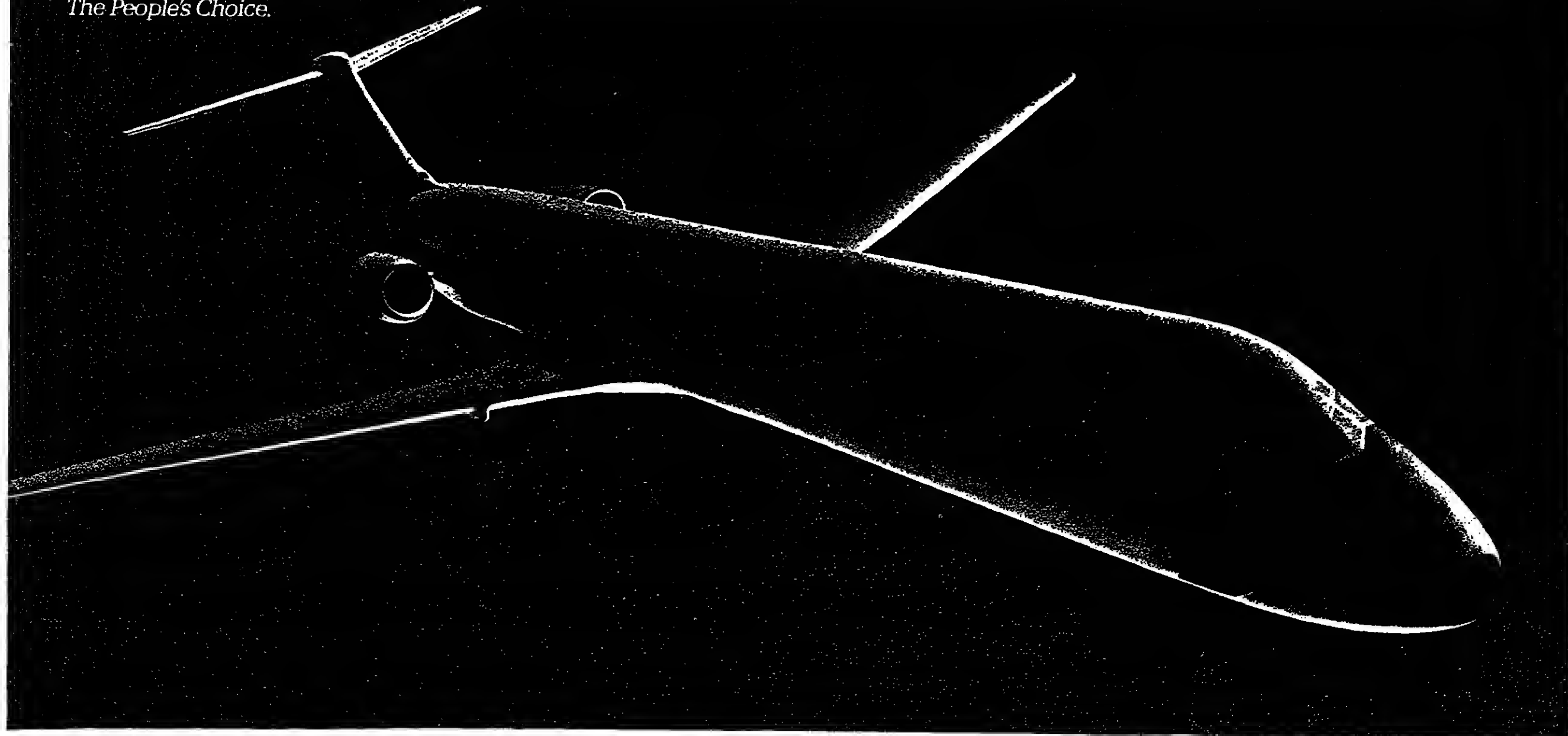
The Sporting Life has been losing money for some time - a £3m loss is expected this year. Mr Maxwell said: "There's no room for two such publications. The Life has been lapsing for 128 years and I am prepared to spend whatever is required to keep it there."

Key to the revitalisation will be a

switch to a new printing plant - almost certainly one which is part of the Maxwell-owned BPC printing and communications organisation - to allow the use of colour and reduce production costs.

The Post is being headed by Sir Gordon Brunton, formerly chief executive of the International Thomson Organisation, and a horse breeder. The Maktoums are reported to have provided £5m to start the paper and to have guaranteed to back it for up to three years.

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UK NEWS

Director of Hawley to leave in shake-up

By Alexander Nichol

MR PETER BAIN, a key director of the Hawley service industry group headed by Mr Michael Ashcroft, is to leave the company amid a surprise shake-up of its peripheral investment interests.

Mr Bain, 42, will take on an executive role in Pineapple Dance Studios, the once-glamorous concern headed by Ms Debbie Moore, which has recently slipped into loss and suffered a sharp fall in its share price.

An investment vehicle controlled by Hawley is meanwhile selling its 26 per cent stake in Pineapple - half of the shares are understood to have gone to Mr Bain himself. It is also disposing of large minority holdings in the Miss World group and in Group Lotus.

Mr Bain's departure, expected to be formally announced this week, is one of a long series of surprises which have dogged Hawley's image in the City of London as it has grown at a bewildering pace through rapid acquisitions, financed largely by issues of new shares.

Last year, during a campaign to improve UK investors' understanding of the company's central businesses, it announced that it was moving its domicile to Bermuda.

Mr Bain, a marketing expert who has headed Hawley's home improvement subsidiary Kean & Scott and will remain a non-executive director there, has been responsible for the drive to explain the company to investors and the press. Since last year, he has been its spokesman.

Hawley has been focusing its growth on commercial cleaning, security products and home improvements, with a marked emphasis on expansion in the US. But it has attracted City criticism because of its diverting non-core investments.

Last year Mr Ashcroft and his friend Mr David Wickins, chairman of British Car Auctions, channelled most of their respective secondary interests into Midstep, a Montreal-quoted shell company.

Despite the recent sales, Midstep still has substantial interests. It owns the motor dealers Henlys, the limousine manufacturer Coleman Milne and has a stake in the packaging group Cope Allman.

Joint attack mounted against Insolvency Bill

BY GEORGE GRAHAM

A RARE alliance of business and consumer lobbies has come together in an attack on the Insolvency Bill now being put through parliament by the Government.

The Confederation of British Industry and the Institute of Directors (IoD) have joined the National Consumer Council (NCC) in condemning as inadequate the Bill's provisions for making directors personally liable for their companies' debts when they are found guilty of "wrongful trading".

The three groups have together drafted a new version of the Bill's clause 9, which defines the offence of wrongful trading. They have written to Mr Norman Tebbit, Secretary of State for Trade and Industry, asking him to adopt the new clause at the Bill's report stage.

They believe the present version of the clause "is obscurely worded,

is unlikely to be effective where it is needed but could have undesirable consequences for the whole business community."

"It would catch nobody at the right time, but might catch everybody when it was too late," said Mr Richard Thomas, legal officer of the NCC.

The NCC has been at loggerheads with the CBI and the IoD during the Bill's passage through the House of Lords. They fought successfully to quash plans for the automatic disqualification from holding office of directors whose companies were wound up.

The consumer group described itself as "sadly disappointed that business interests were able to bamboozle the House of Lords into seriously diluting the Insolvency Bill."

During the House of Commons

committee stage, however, the three groups were brought together by their dissatisfaction within Clause 9 as it now stands.

They feel that Clause 9, in conjunction with Clause 7 - which provides for the disqualification of unfit directors - should solve the problem of phoenix companies, which close down one day and start again the next under a new name, leaving a string of unsatisfied creditors.

The Government has suffered a string of setbacks over the Insolvency Bill. It was outvoted three times when the Bill passed through the House of Lords, and was prevented from reversing one of these defeats in the House of Commons committee stage by a revolt of Conservative backbench MPs. Three Conservatives also abstained from the vote on Clause 8.

Cabinet reviews spending plans

BY MARGARET VAN HATTEM

CABINET ministers met last night for what was described as "a strategic review" of public spending plans over the next decade.

Much of their five hours of talks is, however, understood to have involved a staking-out of territory in advance of negotiations for the 1986-87 spending round which opens on July 4. The discussions focused on the issue of tax cuts.

Mrs Margaret Thatcher, the Prime Minister, Mr Nigel Lawson, the Chancellor of the Exchequer, Mr Peter Rees, Chief Secretary to the Treasury, and Mr Norman Tebbit, Trade and Industry Secretary,

have over the past week all put on record their commitment to tax cuts before the next general election.

Mrs Thatcher, speaking at the Welsh Conservative conference at the weekend, explicitly promised further tax cuts. "Yes, we are cutting personal taxes - not yet enough - but we are going in the right direction and we intend to go further," she said.

At yesterday's talks at Chequers, the Prime Minister's country house, Mr Rees is understood to have shown projected spending levels over the next decade with particular

reference to the soaring costs of defence, education and health and social services.

Mr Lawson is believed to have assured his colleagues that there would be no spending cuts package this autumn - but to have stressed that there would be little room for spending growth over the next three years if the planned £9.5bn tax cuts were to be introduced.

The meeting is understood to have concluded with a long discussion of the options facing the Government, but without any decisions being taken.

Tory MPs rebel over EEC payment

THE GOVERNMENT will face a mini-rebellion tomorrow by some of its MPs over legislation approving an extra £250m payment to the EEC budget for 1985.

Conservative parliamentary officials were last week confident that, while the number of abstentions might be substantial, only a handful would vote against the Government.

The European Communities (Finance) Bill, which is being opposed by Labour, seeks approval for both the "own resources decision" (raising the ceiling on VAT contribu-

tions by member states from 1 per cent to 1.4 per cent) and the inter-governmental agreement (providing for a top-up of £1,180m to the 1985 budget, of which the UK share is £250m).

The Government insists that the impact on the UK budget will be minimal. The special arrangement for abating the UK's VAT contributions means that the maximum VAT rate due from Britain is expected, it says, to remain below 1 per cent throughout the life of the 1.4 per cent ceiling.

Of the £250m extra contribution,

the Treasury estimates that about half will return to the UK in the form of higher receipts, while the rest will be covered by the special arrangements agreed at the Fontainebleau summit, so that the net cost to Britain would be £40m.

The first signs of Tory backbench hostility emerged last week in an amendment to a government motion on development in the European Community. The eight signatories were led by Mr Teddy Taylor and Mr Jonathan Aitken. They called on parliament to ignore "foolish and impractical proposals"

Company Notices

ACCOR

"Société Anonyme au capital" de F. 890.218,700
Head Office: 2 rue de la Mare Neuve - 91000 EVRY
RCS: Corbeil Essonne 5 60203444
Resolutions passed May 28, 1985 by the General Assembly of the holders of ACCOR - 71% - 1984-1999 US\$ 1,000 Convertible Bonds.

First Resolution
The General Assembly of the holders of Accor - 71% - 1984-1999 US\$ 1,000 International Convertible Bonds, at an ordinary meeting, acting pursuant to Article 312 of French law of July 24, 1966, and having taken knowledge of the terms of the Board's report, has decided to appoint as Representatives of the "Masse" of the holders of said Bonds:

—Mr Julien STURDY MORTON —8, Burnley Road, London SW9 0SH

—Mr Jean-Claude NOHEN —17, Boulevard Bourdon — 75004 PARIS

Such representatives shall have, without any restriction jointly or severally, pursuant to article 300 of French law of July 24, 1966, power to take, on behalf of the "Masse" all management actions to defend the common interests of the Bondholders.

The term of their office shall be on the last day of the one-year period commencing on the date set for the repayment of the Bonds included in the last amortization operation.

The Assembly sets the remuneration of each of the Representatives of the "Masse" at FF. 1,500 a year.

Second Resolution

The General Assembly of the holders of Accor - 71% - 1984-1999 US\$ 1,000 International Convertible Bonds, at an ordinary meeting, having heard of the Board's report, and having taken knowledge of the third resolution passed by the General Assembly of the shareholders at an extraordinary meeting, on May 28, 1985 authorizing the Board to effect in France, on the international market or on the foreign market, one or several issues of bonds with warrants to purchase equity shares of Accor, approves, as far as it is concerned, the decision made by the shareholders to waive the exercise of their preferential right to subscribe the Bonds with warrants to purchase equity shares, which could be issued, it being understood that said resolution has reserved, during the first 15 days of the issue, a priority right to the shareholders in case of an issue on the French market.

Third Resolution

The General Assembly at an ordinary meeting, decides that all documents in connection with its calling, its resolutions, its decisions, will be available at the head office.

All powers are given to the bearer of an extract or a copy of the minutes of the present meeting in order to proceed to any necessary registration or publicity.

THE "SHELL" TRANSPORT AND TRADING COMPANY, P.L.C.

Notice is hereby given that a balance of the register will be struck on Thursday, 4th July, 1985 for the preparation of the half-yearly dividend payable on the SECOND PREFERENCE SHARES, for the six months ending 31st July, 1985. The dividend will be paid on 1st August, 1985. For Transfers to receive this dividend, the Company's Registrar, Loyds Bank Plc, Registrar's Department, Goring-by-Sea, Worthing, West Sussex, will close at 5.00 pm on Thursday, 4th July, 1985.

By Order of the Board
D. W. CHESTERMAN
Secretary
Shell Centre
London SE1 7NA
24th June, 1985

Money Market Cheque Account Jersey

Crash Rate Compounded Annual Rate
11.50 12.13
Minimum balance £2500
Annual Report and Accounts available on request.
4, Don Road, St Helier, Jersey, Tel. 0334 38055.
BANK OF SCOTLAND
Incorporated in Edinburgh, 1873

Contracts and Tenders

Republique Algerienne Democratique et Populaire

(Algerian Popular Democratic Republic)

Ministere de L'Energie et des Industries Petrochimiques

(Ministry of Energy and Petrochemical Industries)

Entreprise Nationale des Travaux aux Puits

(National Oil Exploitation Company)

Notice of extension

The National Oil Exploitation Company (E.N.T.P.) - 16, Route de MEHTAH - OUED SMAR - EL HARRACH - ALGER - hereby informs companies concerned with International Call for Tender No. 9136-AY/MEC for the supply of:

09 FORKLIFT TRUCKS

that the closing date, initially indicated as 8/6/85, has been extended to 6/7/85.

FINANCIAL TIMES

PUBLISHED IN LONDON & FRANKFURT

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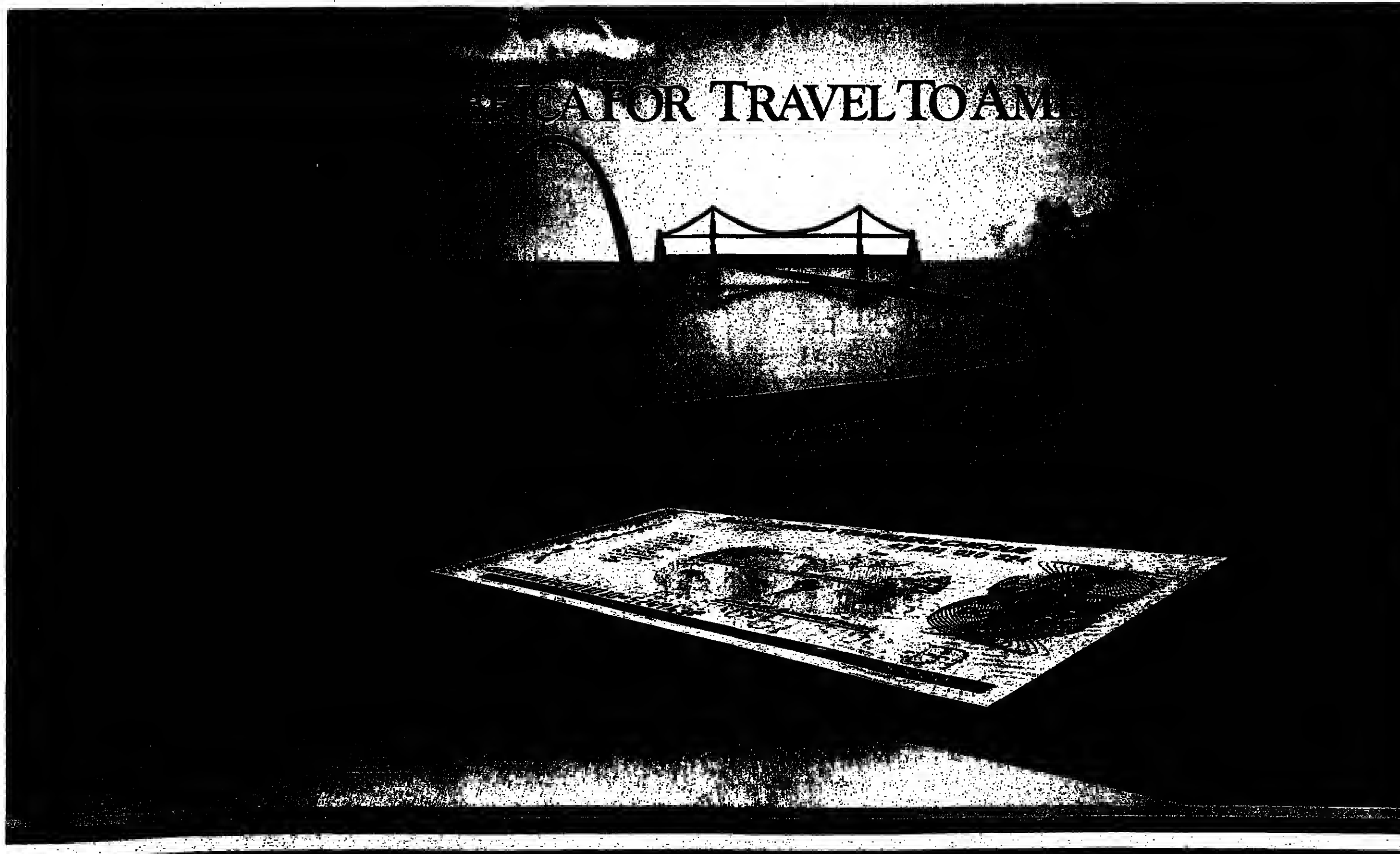
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NEW ISSUE

June 19, 1985



\$25,000,000

Deposit Guaranty Corp.

8 3/4% Convertible Subordinated Debentures Due 2010

Interest Payable on December 15 and June 15

The Debentures are convertible at any time prior to maturity, unless previously redeemed, into Common Stock, no par value, of the Company, at \$38.50 per share, subject to adjustment in certain events.

Price: 100%

Plus accrued interest from June 15, 1985

Copies of the Prospectus may be obtained from the undersigned only in States where the undersigned may legally offer these securities in compliance with the securities laws thereof.

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A great trading tradition.

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Head office: 96, boulevard Haussmann, 75008 Paris.

UK NEWS

Price war over petrol may be renewed

By Ian Hargreaves

RETAIL PETROL prices in the UK appear to be on the slide again after two months of stability.

Both Esso and Shell say they are now offering dealer support incentives to allow their retailers to compete with cut-price offers by smaller, independent petrol companies in the north of England. Competition is, as usual, especially fierce in the north-west.

Almost one in five Shell stations have now cut their prices, in the main to 199.9p a gallon. The official price, which still prevails in most of southern England, is 204.9p.

After fighting a cut-throat price war for most of last year, the oil companies were hoping for a period of respite. The last two months have been the industry's most profitable in downstream oil products for some time.

Independent suppliers, however, have been able to take advantage of the rise in sterling against the dollar, in which spot market gasoline is priced, to buy lower priced bulk petrol.

Strasbourg court to rule on £455m claim

THE LARGEST compensation claim yet made against the British Government under the European Human Rights Convention will come before the Human Rights Court in Strasbourg today.

Eleven former shareholders in companies nationalised under the 1977 Aircraft and Shipbuilding Industries Act will ask the court to rule that they are entitled to more than £455m in extra compensation for the loss of their holdings.

They will argue that the compensation they were paid — a total of £128m — was grossly inadequate and unfair and that their property rights guaranteed by the Convention were violated.

The claims will be vigorously resisted by the Government, which will contend that the UK has fulfilled all its Convention obligations to the shareholders.

A slightly bizarre aspect of the case is that the Government will be defending a law — the 1977 Act — enacted by a Labour Government, which the Conservative opposition of the day strenuously opposed — not least on the ground that its compensation provisions were unfair.

The Government will go into today's hearing with a head start in March last year the European Human Rights Commission rejected the shareholders' claims, holding that the Government had not breached Article 1 of the First Protocol to the Convention, which protects property rights.

The shareholders were able to draw some comfort from the fact that, despite its decision, the Commission referred the case to the court.

Though not without precedent — it has happened once before and once since, in a case involving the UK — a reference to the court in such circumstances is unusual.

They will have at the back of their minds a Swedish case over property rights in which the Commission ruled against the applicants by a large majority but the court, by a narrow majority, took the opposite view.

They will also have been heartened by the disclosure two months ago that last November a senior legal official in the Department of

Raymond Hughes looks at the case against the UK Government over compensation for nationalisation

Trade and Industry acknowledged in a letter to the U.S. Securities and Exchange Commission that the court might rule that more compensation should be paid.

Seven applications are before the court. The shareholders involved are: Sir William Lithgow, who held a substantial holding in John G. Kincaid & Company; Vosper; in respect of its subsidiaries Vosper Thornycroft (UK) and Vosper Ship-repairs; English Electric Company and Vickers, which jointly owned British Aircraft Corporation (Holdings); Vickers, in respect of its subsidiary Vickers Shipbuilding Group; Yarrow, which owned Yarrow (Shipbuilders); Dowsett Securities, Investors in Industry and the Prudential Assurance Company, which were joint owners of Brooke Marine, an East Anglian shipbuilding company; and Banstonian Company and Northern Shipbuilding & Industrial Holdings, which owned Hall Russell & Company.

The compensation paid, and the additional sums claimed (so far as yet quantified) are: Sir William Lithgow £1.07m (£4m); Vosper £5.3m (£48.8m); English Electric and Vickers £95m (£344.7m); Vickers £14.5m (£24.3m); Yarrow £6m (£24m); Dowsett etc £1.8m (£4.9m); Banstonian etc £1.5m (£4.20m).

The claims are derived from valuations of the holdings at nationalisation, plus interest. All will have increased substantially by the time the court gives judgment, later this year, to take account of additional interest.

The Lithgow claim, for example, does not include any interest. That by English Electric and Vickers includes interest calculated to last October. The others have been calculated up to dates between December, 1980, and last September.

Article 1 provides that no one shall be deprived of his possessions "except in the public interest and subject to the conditions provided

for by law and by the general principles of international law." However, those provisions, the Article states, "shall not... impair the right of a State to enforce such laws as it deems necessary in accordance with the general interest."

The 1977 Act provided for compensation to be paid on the basis of the actual or hypothetical stock market valuation of the shares over a six-month period to February, 1974.

The shareholders' complaint is that the amounts they received bore no relation to the actual values of the companies. They also complain about the valuation method: the effect of restrictions on dividend payments and other transactions, and the failure to take account of inflation.

The Commission held that there was a right to compensation under Article 1 when companies were nationalised, where compensation was "necessary to preserve the appropriate relationship of proportionality between the interference with the individual's rights and the public interest."

It went on to find that the compensation awarded did not involve the imposition of a disproportionate burden, such as to infringe the shareholders' rights under the Article.

The Commission recognised that, in some cases at least, there was a wide divergence between the value of the company at nationalisation and the compensation paid, but said that, to a large extent, that reflected the fact that business conditions and prospects, and share values, could fluctuate rapidly.

"The compensation method adopted provided compensation reasonably related to the value of the companies concerned as at the start of the nationalisation process and ignored subsequent fluctuations in their value."

"Although opinions evidently differ as to the fairness of such a method, the Commission considers that it was one which the Government was entitled to adopt within the wide margin of appreciation afforded to them under Article 1."

Change urged in EEC's starch subsidy

By Andrew Gowers

THE EUROPEAN Community should move swiftly to introduce special subsidies for the industrial use of starch, and in particular for biotechnology industries, says a report published today by a House of Lords select committee.

The report supports the European Commission's recently published plan to change the controversial 1984 EEC starch regime, which aims to compensate starch manufacturers for the artificially high price at which they are forced to buy the grain they use as a raw material.

It says there is an urgent need to implement the Commission's proposals "to remove the uncertainties which at present hinder decisions being taken in the new biotechnological industries... All too often the United Kingdom has lagged behind in exploiting new opportunities for industry."

The Commission's plan, due to be considered by EEC farm ministers in coming months, calls for the abolition of subsidies paid to manufacturers of starch for use in the food and drink industries, which it says already benefit from protection against imports under the Common Agricultural Policy.

Instead, it says, higher subsidies should be paid for the manufacture of starch for use in other products, such as paper, board and chemicals, which suffer from a competitive disadvantage as a result of having to pay high EEC prices for wheat and maize, but benefit from no protection against imports made at lower cost.

The proposal has caused uproar among food manufacturers — particularly in Britain, where the food industry accounts for a greater proportion of starch use than in other EEC countries.

City Investing Finance N.V.

NOTICE IS HEREBY GIVEN that pursuant to the French Agency Agreement dated August 1, 1978, between City Investing Finance N.V. ("the Company") and the French Agency for the Management of Foreign Investments ("the Agency"), the Company has elected to redeem all its outstanding Guaranteed Floating Rate Notes due June 1, 1985, of their principal amount, net of any interest, at the rate of 100% of their principal amount, plus interest accrued to the date of redemption.

The Notes may be presented for payment at the following addresses:

By Hand Manufacturers Hanover Trust Company 130 John Street Corporate Trust Window Ground Floor New York, New York	By Mail Manufacturers Hanover Trust Company (Upon Paying Department) 101, Box 2882, GPO Station New York, New York 10116
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The Notes may also be surrendered at the main offices of the following agents:

Amsterdam: Rotterdam Bank N.V.
Brussels: Banque Lambert S.A., Brussels
Frankfurt: Bank für Sozialwirtschaft AG, Frankfurt
London: Manufacturers Hanover Trust Company

Dated: June 24, 1985

Barnett Overseas Finance N.V.

NOTICE IS HEREBY GIVEN that Barnett Overseas Finance N.V. has elected to redeem all of its outstanding 7 1/2% Convertible Subordinated Bonds due 1985, at the Redemption Price of 100% of their principal amount, plus interest accrued to the date of redemption.

On August 1, 1985, the Redemption Price will become due and payable upon all Bonds, and interest thereon shall cease to accrue on and after said date. All Bonds, together with all coupons appertaining thereto maturing after August 1, 1985, are to be surrendered for payment of the Redemption Price at the Corporate Trust Office of Barnett Overseas Finance N.V. in the Borough of Manhattan, The City of New York, or at the main offices of any one of the following agents:

The Bonds are convertible into Common Stock, par value of \$1.00 per share ("Common Stock") of Barnett Overseas Finance N.V., through the close of business on August 1, 1985, at New York. Based on the closing price of the Common Stock on June 6, 1985, of \$40.75, each \$1,000 of Bonds would convert into 24.534 shares of Common Stock. Holders of Bonds who wish to convert their Bonds into Common Stock should tender the interest payment due on August 1 and detach the interest coupon for August 1 for collection in the usual manner.

Barnett Overseas Finance N.V.
By: Barnett Overseas Finance N.V.
June 24, 1985

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WITHOUT TANDEM COMPUTERS?



Well, it would still be in New York. But, we venture to suggest it might not be quite the financial power it is today.

Hard to believe? Perhaps.

But the fact remains that a significant part of one of the world's most complex international business communities runs on Tandem computer systems.

Can one computer company make that much difference?

Aren't all large computer systems basically the same anyway?

Well, at Tandem, there is a difference.

A unique on-line system which works like no other computer.

A system which has taken Tandem from scratch to \$530 million annual turnover—and put us into FORTUNE magazine's top 500 U.S. companies.

WHERE WOULD FORTUNE 500 BE WITHOUT TANDEM COMPUTERS?

FORTUNE 500
349

Just ten years after we started, Tandem joined 150 of our customers in FORTUNE magazine's top 500 U.S. companies.

A system we believe will be just as revolutionary for large U.K. organisations as it has been for our clients throughout the rest of the world.

Because it'll actually work with whatever computer system you're currently using to run your business. And make it better.

WHAT'S WRONG WITH THE SYSTEM I'VE ALREADY GOT?

Virtually every large company in the world uses a conventional mainframe computer system to run its business.

The mainframe is norm, and has been since the basic technology was established some thirty years ago.

It's part of the furniture—and that's part of the problem. Because companies have grown used to putting up with the problems inherent in mainframe system design.

Like the fact that you can't always have all the information you want, when you want it.

When it's working to capacity, you have to "queue." And, when you want to expand that capacity, more often than not you have to replace the system with a bigger one.

Which often means stopping, retraining staff, rewriting programs—and writing off your initial investment.

If you need a "fail-safe" computer—one that can continue to function even if there's a breakdown in the system—conventional mainframes can handle it. You just buy two identical systems (at double the cost) and one sits idle waiting for the other to break down.

A neat solution if you happen to make the computers. Not exactly good economics for you.

Like it or lump it, these are the "rules" of conventional computers.

Tandem breaks them all.

SO WHAT'S THE DIFFERENCE?

Some ten years ago, Tandem looked at the problem and found a unique solution.

We did it by developing a system which cures all the day-to-day headaches that come with conventional computer technology.

Our system, for example, has fault tolerance built into it. If a single component fails, another automatically takes up the workload.

Data integrity is built-in, too. Which means that vital information shouldn't be lost or corrupted in the event of a fault.

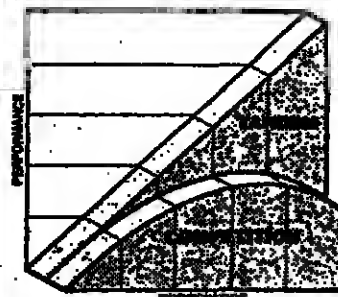
If you want to expand the system—or the database—you can, almost indefinitely. Without disrupting the system or the business.

Like building blocks, you simply add another processor when you're ready.

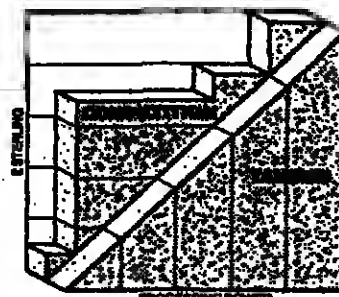
So there's no need to over-invest now in computer power you're not actually going to need until some later date.

And, unlike conventional systems, there's no decline in computer power per £ as your system grows either.

You don't need to be a financial director, or a data processing manager, to imagine what that can mean to computer cost efficiency.



With conventional computers, doubling your processors does not double your performance. With Tandem, each incremental increase in processing power provides matching performance.



With conventional computers, you must continually over-invest to ensure sufficient processing power. With Tandem, growth matches need, so you never invest more than you have to.

What's more, thanks to Tandem's unique distributed database, all system users can have access to the same up to date information simultaneously, anywhere in the world.

However large the organisation is.

(Tandem allows from 2 to 16 processors in a single system, and up to 255 systems in a complete international network, all of which can interface with each other.)

If that sounds complicated to operate, it isn't.

In fact customers in the prestigious U.S.

Cowan/Datamation Survey have voted Tandem No.1 for customer loyalty.

Not once. But for three years running.

Ahead of every other major computer company.

ON-LINE TRANSACTION PROCESSING.

SURVIVAL OF THE FITTEST.

A Tandem on-line system doesn't just solve the problems of conventional mainframe computers.

(As if that weren't enough).

It actually ushers in a new age where the computer can respond far more effectively to the changing environment in which business must operate to survive.

An age where management is based on information—not intuition.

Where information is fresh, not hours or even weeks old. Where people can access, update and act upon relevant data anywhere in the system network, anywhere in the world.

The age of on-line transaction processing.

The fastest growing sector of an already exploding computer market.

SOME OF OUR MAJOR WORLDWIDE CUSTOMERS.

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BRITISH TELECOM	HERTZ	FITNEY BOWES
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EQUITY & LAW	MOBIL OIL	SCANDINAVIAN
FEDERAL EXPRESS	MOTOROLA	AIRLINES SYSTEM
FORD MOTOR COMPANY	NATIONAL GLOBANK	TRUSTHOUSE FORTÉ

Thanks to our unique approach to system design, Tandem lead the world in on-line transaction processing.

And, as our phenomenal growth in the last ten years shows, it's here to stay.

We set out in 1974 to develop the first fault-tolerant computer system.

Along the way, we created a system that's highly reliable; simple to operate, easy to expand—and versatile enough to handle the communication needs of virtually any corporation.

No matter how big. No matter where.

A system which can go to work improving your business—without destroying your investment in current computer technology.

Fanciful? We don't think so.

And neither do our existing customers in the financial world, telecommunications, manufacturing, distribution, transportation, retailing, energy—and government.

Throughout the world.

Tandem Computers cut the knot for them. Could we do it for you?

For further information and a copy of our Annual Report, please contact Michael Lambert, Tandem Computers Limited, Peel House, 32-34 Church Road, Northolt, Middlesex UB8 5AB. Tel: 01-841 7381. Telex: 933333. Other offices in the City, West End, High Wycombe, Birmingham, Rochdale and Glasgow.

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• FOR DISTRIBUTION • ENERGY • FINANCE • GOVERNMENT • MANUFACTURING • RETAILING • TELECOMMUNICATIONS AND TRANSPORTATION •

MANAGEMENT

Davy Corporation

Keeping one step ahead

Ian Rodger describes how the UK process plant maker has managed to stay profitable

WHATEVER ELSE can be said about Davy, Britain's leading process plant contractor, the group is an excellent example of corporate adaptation.

Davy has had some terrible reverses in recent years — the collapse of its steel fabricating business, a slump in U.S. plant orders and horrendous losses on a chemical project in the Soviet Union. But it has managed to stay among the top six contractors in the world and to keep its operations profitable.

One key to Davy's survival — setting aside the help of the UK Monopolies Commission in fending off an unwelcome takeover bid from the U.S. engineering group, Enserch, in 1981 — has been its ability to react quickly to trends in its industry.

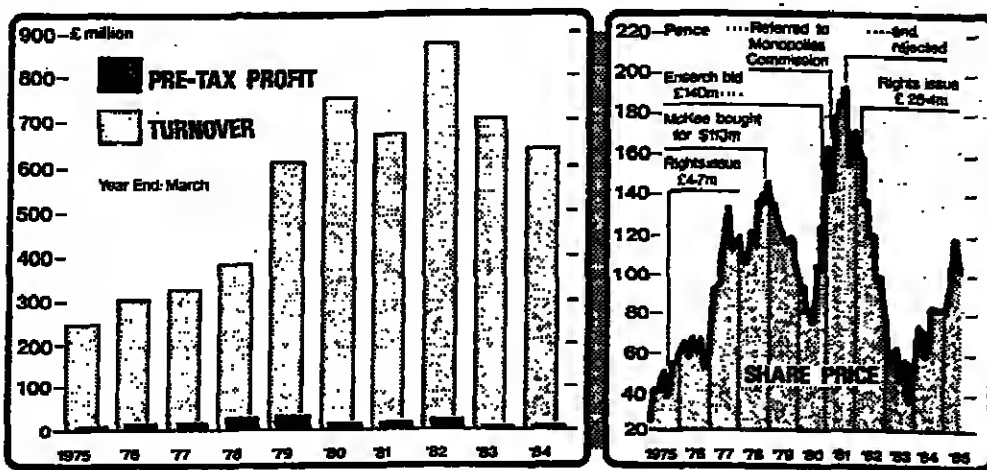
In the late 1980s, Davy saw the trend to megaprojects and realised that customers preferred dealing with very large contractors. It set out on a series of acquisitions to build up the group's size, geographical coverage and range of skills so that it could handle even the biggest projects.

For a while, that was a successful formula. Davy picked up a \$1bn contract to build an integrated iron and steelworks in Brazil, a \$430m oil refinery project in Canada, a \$380m rolling mill complex in Yugoslavia and several others.

But by the early 1980s, the megaproject era was over. Most of the developing countries no longer had the money to finance them; the industrialised countries were deep in recession and no longer needed big new plants.

An important change in the relationship between contractors and clients was taking place too. In the 1970s, the turnkey concept, in which a large contractor would take total responsibility for an entire project, was popular. If it didn't have all the needed technology, it would buy it from others. Indeed, many contractors used their lack of technology as a selling point, saying they were unbiased and would buy the best technology available.

Today, the trend is in the other direction. Customers worry about the performance of new plants and so prefer to deal with a contractor who uses his own tech-



nology. Contractors, facing very tough competition for the few orders available these days, prefer to promote proprietary competitive edge. Also, they compete where they have a make better margins on these deals because they do not have to pay royalties to the owner of the technology.

"Wherever you see a good technology in Davy today, you see a good business," Graham Raper, the deputy chairman, says.

Davy's traditional technologies are in iron and steel, dating from the 1930s when the Davy brothers set up in Sheffield to make steel mills and forges. Its period of expansion and diversification began in 1960 when it acquired Powergas, a builder of town gas plants and chemical and fertiliser plants. It had the rights to the ICI technology that enabled Davy to become the dominant supplier of methanol plants in the world. Powergas also owned Ashmore, Benson, Pease, the leading blast furnace maker, and Davy is still among the top world suppliers of blast furnaces. Earlier this month, it won a \$75m contract for a new furnace in South Korea.

However, until the early 1970s, it was still mainly a UK group. Then, under the leadership of Sir John Buckley, it embarked on a series of foreign acquisitions. These included three German companies, Bamag (water and effluent treatment plants), Zimmer (synthetic fibre plants) and

Chimiebau (petrochemical plants) and two U.S. companies, Wellman-Lord (fertiliser and pollution control plants) and Olsen Engineering (oilfield development).

But its biggest move came in 1979 when it bought McKee of the U.S., a diversified plant supplier with 20 offices around the world, for \$113m. McKee added food and pharmaceuticals, oil refineries and alternative fuels, plus a much expanded presence in the U.S. market. In 1980, two years after the McKee acquisition, Davy's turnover in North America reached \$288m, 38 per cent of the group total, compared with only 26 per cent in 1977.

During this period, Davy also bought two UK manufacturing companies, the crane maker Herbert Morris and the Head Wrightson steel fabricating business, partly because they were somewhat complementary to its contracting activities, but mainly to bolster its asset base.

Until the middle of 1982, it looked as if Davy's expansion strategy was working. Both turnover and profits rose to new levels well above those achieved in the early 1970s. But then the markets for plants dried up worldwide. The group's forward order book dropped from \$220m in March 1982 to \$152m a year later.

Among the big blows were the cancellation of a \$1bn steelworks project in India and the deferment of steel projects in Brazil and Mexico. Pre-tax profits slumped from \$20.4m in 1981-82 to \$6.3m the following

year. Davy shares tumbled from a peak of 205p in 1981 to only 35p in 1982.

Sir John Buckley retired late in 1982 and Peter Benson, the retired chairman of APV, another process plant group, was brought in to manage the needed restructuring.

The Brussels office, which specialised in petrochemicals, was closed and the work transferred to Cologne. Then Cologne was closed following losses of \$4m on a petrochemical project for the Soviet Union and lesser losses on other contracts. The Soviet contract went sour because U.S. technology was used and the U.S. authorities blocked its transfer. Most of the work was transferred to the Head Wrightson operation in the UK and closed and the remainder sold last year to a private group following huge losses. Davy's contracting subsidiaries, it turned out, did not use Head Wrightson for their fabrication work. In the U.S., McKee's head office in Cleveland and other offices in California and Texas were closed and the workforce slashed from 5,000 to only 1,100.

The total group workforce has dropped from a peak of 20,000 in 1980 to under 9,000 today. Rationalisation charges have exceeded \$30m in the past three years.

The figure is remarkably close to the amount shareholders have put into the group via two rights issues in the past 10 years, and some would argue that Davy has very little to show for its decade of action. Certainly, there has been no pro-

gress on the earnings per share front and the shares themselves, much to the embarrassment of Davy directors, are worth little more than half of what Enserch was willing to pay for them in 1980. The title of "flagship for British exports" that the Monopolies Commission gave as a reason for preventing the Enserch takeover now looks rather pretentious on the medium-sized group that Davy has become. Its \$201m worth of exports in 1983-84 were not enough to put it in the top 30 of British exporters.

Benson, now about to retire after three years' hard labour, would invite the critics to look at the other major process plant contractors. Fluor, in the U.S., reported a loss of \$72m in the six months to April 30. Technip, in France, has just received a FF7.2bn financial rescue package. By contrast, Davy has completed the surgery needed to bring its costs down to the much reduced level of orders available.

He also points out that Davy has recognised that the market potential of its traditional lines in metals and chemicals plants is much less than it was. The group has acquired and developed some strong light technologies in the past few years to take up the slack.

For example, Zimmer leads the world in synthetic fibre technology and has 40 per cent of the world's fibre plant orders, including 15 in China. Benson says the Frankfurt office, which has also become prominent in supplying five gas desulphurisation systems (to prevent acid rain) is "the busiest part of the group" and will make profits of \$5m next year.

In the metals area, Davy has developed a microprocessor-based shape control system for rolling mills, and has sold 85 of them into aluminium and steel mills around the world.

However, these may not be enough to bring about the kind of recovery and growth that Davy wants and that shareholders are entitled to expect. Benson says the group has high hopes for an offshore contracting venture with Trafalgar

House set up earlier this year, and that the remaining manufacturing businesses, Davy Roll and Herbert Morris, are doing very well.

Davy is always on the lookout for opportunities to buy good process technologies, and it wants to increase its interests in related service industries. It owns Lloyd's British Testing, which does hoist maintenance for the National Coal Board and others and has a 50 per cent stake in Seneco, a company that supplies anti-theft tags for shops.

But process plant contracting, now 50 per cent of the business, will remain the dominant factor, and no one is predicting a major upturn in the sector in the near future. Davy has adapted remarkably well to the tougher environment in which it has to operate, but the obstacles to satisfactory growth and profits still seem considerable. It is striking that, even though the group's shares have been deeply depressed for over two years, no predator has yet been tempted to spring.

For Davy new technology is the key to survival — as at this new steel cold mill being built by Davy McKee (Sheffield) in Yugoslavia.

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Management abstracts

The paradox of corporate culture. R. T. Pascale in California Management Review (U.S.), Winter 85 (151 pages). Quotes examples of how companies successfully create corporate cultures by deliberate process of "socialising" their employees, claims this need not break down individualism (which the Americans hold so dear), and describes the main stages towards socialisation; gives a checklist for rating a company's corporate culture, and suggestions for "humility-inducing" experiences.

The managerial clerk syndrome. R. W. Linstead and J. S. Fielden in Business Horizons (U.S.), Jan-Feb 85 (84 pages). Argues that many managers and staff professionals are not being helped by office automation (particularly word processing), because the time they utilise in document generation is often ignored or distorted in the quest for secretarial/typing productivity — while managerial productivity is being reduced. Presents typical activity profiles indicating relative times engaged in document generation/processing tasks and discusses their content particularly in terms of top/middle managers and professional/technical staff — as a basis for determining the type of word processing support required. Essential reading. R. J. Hilly and R. M. Gwynn in Business Marketing (U.S.), Feb 85 (6 pages).

Describes how Reliance Electric (an Exxon subsidiary making power distribution equipment) has introduced a computerised advertising response-bidding system aimed at better sales/prospect coordination, and building a comprehensive customer database. Outlines how the system works: the communications link with the field salesforce, and the added benefit of tele-marketing. Claims advantages in quicker response times and better tracking of potential customers. A related article describes a key of initial inquiries, quantifying the relationship between inquiry-producing advertising and resultant sales, which enabled the calculation of costs per sales lead and average sales return per advertising dollar.

These abstracts are condensed from the abstracting journals published by Amber Management Publications. Licensed copies of the original articles may be obtained at £3 each (including VAT and p and p; cash with order) from Amber, P.O. Box 23, Wembley HA5 8DT.

TECHNOLOGY

Software buyers call the tune

Big companies know far more today about buying programs reports Alan Cane

A QUIET revolution has been changing the shape of the big computer software industry, obscured and overshadowed by the meteoric rise of micro-computer software companies like Microsoft and Lotus Development Corporation.

So dazzling have the prospects and potential of these fledgling companies been that it is often easy to forget that the software business was mature and soundly structured well before the first micro-processor saw the light of day. And according to the U.S. consultancy Input, quoted in the Fintech publication Software Markets, while the market for large computer software is worth \$12bn this year, the figure for personal computer software is only \$2bn.

Corresponding figures for 1989, according to Input, will be \$29bn and \$6bn. So for the foreseeable future, software will continue to be dominated by the big machines — even if the machines themselves become no bigger than filing cabinets.

The revolution is being fomented by customers who are significantly more knowledgeable and significantly more demanding than a decade ago. Alan Benjamin, director of communications at CAP, a leading UK software house, says: "We used to say to our customers: 'Here is the system specification we have drawn up for you. How do you like it?' Now we work with them to produce the system they want."

hespoko software written to fit the clients' exact needs, but the revolution is affecting every kind of software house.

Management Science America (MSA), for example, the largest independent software house in

pieces of software designed for specific applications — accountancy, for example — yet general enough to be used by a number of different companies without modification.

Mr Stuart Walsh, managing director of MSA UK, identifies the principal changes over the past 10 years.

"Buying decisions are being made by teams which are predominantly made up of users of the systems, rather than the data processing specialists. Furthermore, these users are much more senior and more sophisticated in their understanding of computer systems than in the past. We used to talk to data processing specialists. Now we talk to project managers — who are the real users."

Mr Benjamin says the systems themselves are becoming more complex with a heavy emphasis on communications and sophisticated peripherals.

There was a steady move to fixed price contracts which put pressure on software houses to work efficiently and to tight deadlines.

"What has happened is that software houses have changed. First they were simply body-shops, hiring out programmers to work on their clients' projects for a fee. Then they ran

projects on their clients' premises working in organised teams. Now today, we undertake contracts, frequently as prime contractors."

Why do companies like CAP continue to write bespoke software when all the predictions have been that packages, supplied by companies like MSA with their attractive economies of scale would be the software of the future?

"People have been predicting the death of the custom-built system for years," Mr Benjamin says. "But many companies will not accept the package approach; they do not want to run their business like their neighbours."

The move to fixed price contracts means that software houses are working more on their own premises using capital intensive methods to ensure their projects come in on time — powerful computer systems, project control software. There is a new emphasis on the prototyping of systems to test whether they come up to the customer's requirements.

With factory systems, this can be critical. Mr Benjamin tells of a warehousing system which used photoelectric cells for machine control. A mouse passed through one of the beams switching on a crane which trundled across the warehouse until it crashed into another crane. It was a two minute programming job to put the system right, but the consequences could have been serious if the system had been running live.

Integration, again, is the key. Orders are passed over the link activating the automated warehouse which controls the picking of handtools to satisfy the requirements of individual shipments. It also produces the delivery documentation.

This information is relayed back to head office to initiate production of invoices. From receipt of a customer order, CAP claims, the integrated system will allow shipment from the despatch dock within a single day.

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ENGINEERS at the Department of Trade and Industry's National Engineering Laboratory in East Kilbride, near Glasgow, have produced a set of software commands to control a team of robots in assembly jobs.

The program, called CONNEL, enables a technician to co-ordinate the operations of the robots with sensors that feed the machines information and other devices that may, for example, channel objects toward the robots grippers.

The three robots in the picture, all made by different manufacturers, are assembling glass fibre pieces into a pre-form needed to mould a car wheel from fibre-reinforced plastic. The robots could equally well do other assembly jobs, for instance putting together the components of an electric motor.

With CONNEL, which is used in conjunction with a cheap microcomputer, workers can relay a list of commands to the robot system, for example to test the machines in a number of set routines and to check that the robots are receiving information correctly from sensors. The latter could be TV cameras that provide data to robots about the position of objects they have to pick up.

The program includes a safety mechanism under which the complete system shuts down if any of the robots encounter an unexpected obstruction — a person who has wandered into the path of the machines' mechanical arms, for instance.

With computers, engineers would try to assess the effect of different wing shapes, in disturbing the flow of air. As a result, aerospace manufacturers could be helped in the design of new aircraft.

For Prof ARGYIS, the analysis of gas molecules would follow similar studies involving work out the patterns of stresses in items as diverse as ice-breakers, escalators, buildings and cars.

changes in the shape of the chamber or in the flow of fuel alters the rate at which the gases burn and so affects the efficiency of the engine. Studies with the computer would be backed up by experimental work on engines in test rigs.

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Bid to improve engine economy

RESEARCH institutes and companies from West Germany, France and Britain are planning a £25m programme to produce designs for more efficient engines from studies of particles in motion.

The group, which wants the European Commission to put up some of the cash for the project, aims to examine the movement of molecules of gases in the combustion chamber of engines of cars or aeroplanes.

The results could lead to a better understanding of the processes that take place when gases burn, which ultimately could produce designs for new engines that consume less fuel. Organisations that are discussing the programme include Stuttgart University, University

College in Swansea, London's Imperial College and four companies — Renault and Dassault of France, Daimler Benz of West Germany and Britain's Rolls-Royce.

According to Professor John Argyris, head of the Institute of Computer Applications at Stuttgart University, the project would require hugely complex calculations on a supercomputer such as an American-made Cray machine.

The group would do theoretical studies with the aid of the machine. For instance, they would attempt to work out how the gas molecules inside a combustion chamber interact with each other during the burning process.

The work would show how

changes in the shape of the chamber or in the flow of fuel alters the rate at which the gases burn and so affects the efficiency of the engine. Studies with the computer would be backed up by experimental work on engines in test rigs.

With computers, engineers would try to assess the effect of different wing shapes, in disturbing the flow of air. As a result, aerospace manufacturers could be helped in the design of new aircraft.

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Design and Construct



Safety move in spills of chemicals

ACCIDENT victims in hazardous places of work could benefit from an emergency shower produced by Haws/Lennart Krusman AB of Tullinge, Sweden. The device has a special unit for washing eyes and the face and operates in sub zero temperatures at various water pressures.

The device can help people who have been splashed with dangerous chemicals. To help accident victims who may not be able to see clearly, the shower is operated by a pull-rope attached to an overhead pulley.

Dr Bernd Aslund of Uppsala University has shown in studies that large quantities of fresh water are more useful in treating accidents than smaller units which simply channel water to localised parts of the body.

Taking the strain... A STRAIN gauge transducer sold by Shape Instruments of Reading employs a novel ceramic diaphragm that reacts to the pressure of gases or liquids.

The diaphragm, based on alumina, is moulded rather than machined. As a result, says Shape, it can be produced at relatively low cost. The diaphragm is tough enough to withstand a battering from many substances used in industry and is chemically inert.

UK space consortium

THREE BRITISH companies are to form a consortium to offer services to the European space industry.

Information Technology, based in Winchester, is to join forces with the venture with RCA Services and Marconi Computer Systems. The group will help satellite companies to assess the reliability of space vehicles and to monitor satellites.

FINANCIAL TIMES SURVEY

Monday June 24 1985

Industrial Paints

Struggles for market share dominate an industry adjusting to rapid technological change, market fragmentation and tight margins in the teeth of recession

Restructuring for survival

IT IS a sign of the times Mr Hans Miver, president of the Swedish paintmaker, Wilhelm Becker, is offered a paint company for sale about once a month. In West Germany, Herr Hans-Harald Grebe, sole owner of the innovative and burgeoning Weilburger Group, is approached frequently by multinational giants to sell out.

These are just two symptoms of widespread turmoil in the world's paint industry. According to Mr Jim Honan of ICI: "The industry has undergone more changes in the past five years than in the previous 30 to 40."

"Pressure will grow with the increasing emergence of plastics in the car industry and the technical problems of painting them. Only those who are fast, flexible and technologically advanced will survive."

Industrial paint has been affected by recession throughout the world because it can be sold only while manufacturing industry is making products with surfaces that need to be painted. In Britain, as elsewhere, sales volume plunged more than 20 per cent in 1981 and has bumped along the bottom ever since.

To make matters worse, prices have been static while raw material costs have risen steadily.

One result has been that margins are very tight—less than 5 per cent, says Mr John Asher of Crown. This makes market share crucial in all sectors, either to generate fast turnover in high-volume markets, or to maximise profitability in the low-volume, specialised ones.

The other result has been a fragmentation of the West's industrial paint market. "There are about 30 market segments now," Mr Asher says. Between three and seven companies compete in each segment in each country.

"Some segments can be subdivided, as between large drums, small drums and tubes, all of which are part of metal packaging. Some segments may be bigger than others."

"Everyone has to find the resources to innovate, but the typical development period for a new product is about five years. At the end of the day you scratch each other's eyes out for market share."

Mr Bill Collins, of Berger Britain, echoes this: "There has been a lot of market instability. Restructuring and market segmentation in the industrial field has moved from a national to an international scale."

"It is all linked closely to technology. In vehicle refinishing alone we have to give service on about 10,000 colours. No one paint manufacturer, no matter how big, can afford to put R & D resources into all lines."

There is probably no such thing any longer as a general paint company able to supply any market. That includes world giants such as PPG and Du Pont in the US, and Hoechst, ICI and BASF in Europe, no matter how great the availability of cash resources from the chemicals industry to back them.

These pressures have fuelled an accelerating rush out of markets where companies are weak and a concentration into those where they are already strong or see a clear chance of seizing leadership or a share in dominance. Some companies have decided to get out of paint altogether.

The biggest manifestation of these pressures was the sale of Imron last month by United Technologies for \$1bn to BASF, the West German chemicals company. The rationale behind the purchase was seen in terms of ink—BASF is the world's biggest inkmaker.

But the rationale is equally strong for some paint markets, especially the highly lucrative one in vehicle refinishing. People will continue to crash and bump their cars, even if they do not buy so many new ones and even if the new cars are smaller with less surface to paint.

BASF is probably world leader here too, though there are wide variations in the company's position in markets about the globe. It almost certainly dominates in Western Europe—a third of the world market—and in Britain has

leapt from about sixth to second place through owning Glasurit, Imron and Valentia.

BASF bought Valentia UK last year, while ICI, which is trying to increase penetration in Continental paint markets, Valentia's operations in France. But when it comes to fighting on the acquisition battlefield, ICI's position is difficult, because in total paint sales it already out-sells its nearest rival, International Paint, by about two to one.

Survey written by
IAN HAMILTON
FAZEY

This raises Monopolies Commission considerations. For example, it is already at or near the 25 per cent share of vehicle refinishing in Britain that would have triggered monopoly investigation had it bought Valentia in the UK, even though ICI could be vulnerable to BASF in some technologically advanced sub-segments of the market.

ICI has also been diversifying, however, selling its ACE business—heavy duty paints for agricultural, construction and earth-moving equipment—to the Donald Macpherson Group. This boosted the buyer's share of the ACE market in the UK to about 25 per cent.

This has put that business into Finnish hands. Tikkurila, the paintmaking subsidiary of the state-owned chemicals com-

pany Kunda Oy, last year bought Macpherson—the fourth biggest paint company in Britain—beating off bids by Becker and Yule and paying an over-the-odds \$26m.

The expansionist ideas of the thwarted Mr Hans Miver, of Wilhelm Becker, were soon revived when one of his monthly sale offers was from the Cookson Group. This wanted to divest itself of the Liverpool-based Goodlass Wall, the UK's sixth largest paint company.

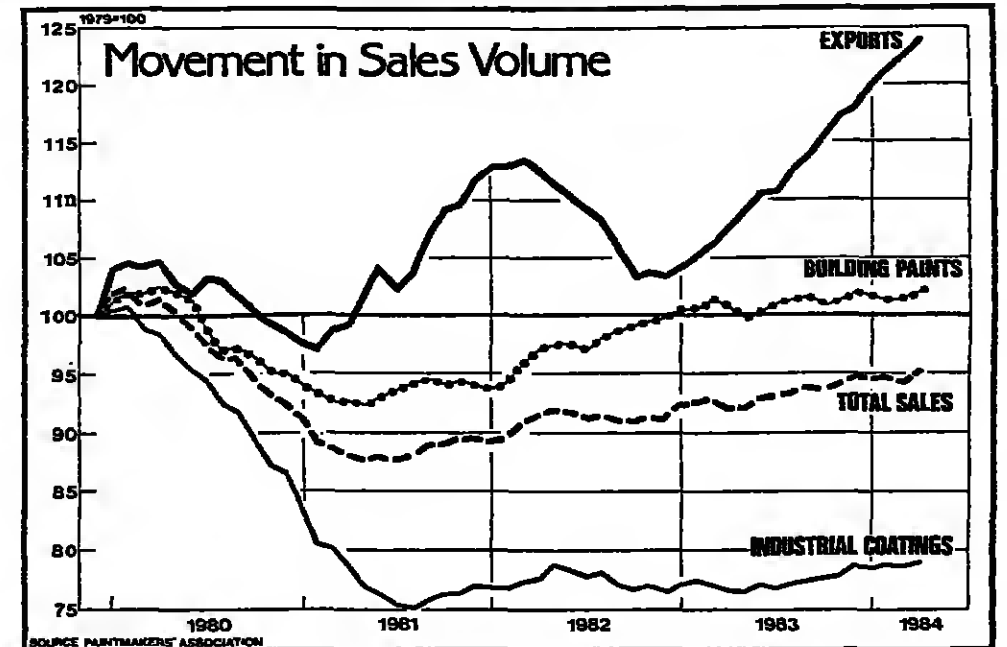
Cookson kept 25 per cent of the equity but the acquisition gave Becker much-needed capacity to make resins and powder paint, plus one of GW's prize assets—the British rights to the US-owned Valspar label in the trade and decorative sector.

Mr Miver says: "We needed to expand in all these areas. I don't think of it as a consolation prize for not getting Macpherson's. We had done a lot of homework on the industry. Goodlass Wall fitted in just as well."

Becker, which has 44 per cent of the Nordic industrial paints market, thus continues its European growth by acquisition. Previous major purchases have included Conway Coatings (UK), Wulfin (West Germany) and Bichon (France). Mr Miver says the alternative to becoming a multinational in its own right was for Becker to stay at home and wait to be taken over by a multinational.

But Becker, too, is rationalising. It is selling Wulfin's automotive business to PPG, acknowledging that it had insufficient strength to be other than an also-ran in that segment of the West German market.

Meanwhile, PPG has also



The effect of recession on paint sales has been dramatic, with the sales volume of industrial coatings dropping more than 20 per cent in 1980-81 and hardly recovering since. "The industry can only survive while our customers are making surfaces in paint," says Mr John Cox of the Macpherson Group. Export growth reflects the increasing internationalisation of the paint industry but the volume growth here has not been enough to compensate for lost business in domestic industrial markets.

bought International Paint's automotive business based in Ladywood, Birmingham. Both Wulfin and IP were licensees of PPG's electrocoat technology, where car bodies are painted using electro-chemical principles (a technology based on original work by ICI). The rival system is owned by Hoechst, of which Berger is the British arm.

All the other paint companies are attaching great significance to PPG's acquisition of parts of its former licensee, anticipating a fight with Hoechst—though PPG has yet to declare its hand.

Similarly, International's exit from car painting amazed many competitors, though Mr Eryl Morris, chief executive, cannot see why.

"We were in automotive in only two countries, the UK and Australia," he says. "We did not have the base to develop the business internationally. We thought it was right to get out."

"We want to grow in marine,

where we remain the world market leader, and powder where we are already in the top three. We are on the lookout to buy but we are not going to spend for the sake of spending."

Much of the paint industry involves conservative little companies that probably will not survive in the long term. But there are still a lot—like Weilburger—worth buying because they have secured their positions in specialised, small markets by astute management and by keeping up the technology content of products.

Thus there are still about 276 companies in Britain, 350 in Spain, 250 in Germany, 235 in Italy and 231 in France, though in Britain polarisation between big and small is further advanced than in most other comparable markets. Two companies dominate a total of 30 per cent of the market, six control 65 per cent and 10 have 80 per cent.

By contrast, two West German companies control 20 per cent of the total domestic market while 15 have half between them. But Sweden now has only 10 paint companies and Mr Miver expects a similar degree of rationalisation in Europe eventually.

Paint is a formerly mundane product that has become a high technology, international business (Bac has grown ever-tougher with the recession). Mr John Cox, of Macpherson, sums it up: "We are all fighting like dogs over a bone. There is no volume and no growth."

"When I started in the industry you put on a primer, two basecoats and two finishing coats, with women hand-brushing with wet-and-dry cloths in between. Modern coatings are so advanced you need only one to do a better job. Less paint is being used and fewer items to put it on."

"Paint has become an aggressive, crazy industry."

No need for rose coloured glasses.

It's a tough commercial world but Macpherson's don't look at it through rose tinted glasses. We have always believed in a policy of strength through diversity. Whether in top quality best-buy consumer paints from the High Street or high tech paints and lacquers for industry the individual companies that make up the group have always enjoyed an excellent reputation in their specialist fields. That strength and in-depth technical ability attracted the Finnish company Tikkurila who became Macpherson's new owners last year.

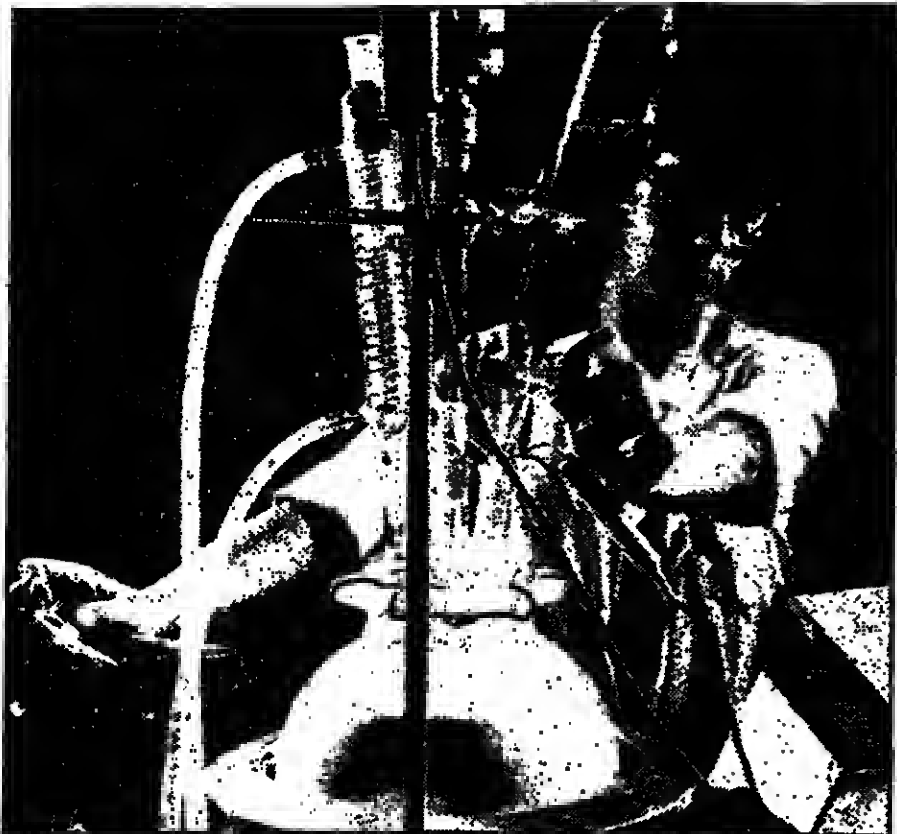
Now with a new management structure and an aggressive investment programme, coupled with realism suited to the industrial and consumer climate of the late eighties, the group is better poised to provide an integrated service and a range of products in keeping with its position as a market leader.

We all know the next few years are going to be difficult for the paint industry as a whole. Who better to face the challenge than an old company with a new future?

CORPORATE OFFICES		INDUSTRIAL		TRADE AND RETAIL		INTERNATIONAL COMPANIES	
Tikkurila Macpherson Group Plc		Macpherson Industrial Coatings Ltd. (incorporating Tikkurila Paints Ltd., Macpherson Coatings Ltd. and Paint Products Ltd.)		Donald Macpherson & Co Ltd.		S & T Polymers Ltd.	
Kilburn House, 30 Old Street, London EC1A 3EA		Kilburn House, 30 Old Street, London EC1A 3EA		Waltham Road, Bury, Lancs BL9 9NS		Station Road, Brixton, London SW2 1JG	
Tel: 011 355 0431/2/3/4/5		Tel: 011 355 0431/2/3/4/5		Tel: 011 754 6030		Tel: 011 754 6030	
Telex: 21335		Telex: 21335		Telex: 658678		Telex: 658678	
Telefax: 011 355 0432/204		Telefax: 011 355 0432/204		Telex: 658678		Telex: 658678	
Tikurila Oy, Helsinki, Finland		Tikurila Oy, Helsinki, Finland		Tikurila Oy, Helsinki, Finland		Tikurila Oy, Helsinki, Finland	
Tel: 011 355 0431/2/3/4/5		Tel: 011 355 0431/2/3/4/5		Tel: 011 355 0431/2/3/4/5		Tel: 011 355 0431/2/3/4/5	
Telex: 21335		Telex: 21335		Telex: 21335		Telex: 21335	
Telefax: 011 355 0432/204		Telefax: 011 355 0432/204		Telefax: 011 355 0432/204		Telefax: 011 355 0432/204	

Some of the Tikkurila-Macpherson brand names COVER PLUS Decorative Paints, MACPHERSON'S Trade Coatings, MONICOLOR Thinning Systems, PORTAFLEX & PORTATONE Multipurpose Spray Paints, EPIMAC Floor Coatings, POWERCOAT Masonry Paints, Tef & FIREFLEX Fire Resistant Coatings, STERACRYL Fungicidal Protective Paints, UVITEC Wood Finishes, PULVERLAC PORTASET Thermosetting Powder Coatings, DIOLPATE HYPERLAST DIPRANE Urethane Polymer Intermediates and additives, SOLIDAIR Polyurethane Filled Tiles, BEEZ Pre-packaged Hardware Finishes, SSSONS Consumer Paints in Overseas Markets, TEMACOLOR Industrial Colour Systems, TREBAX TREGRANITE Mirror Backing Materials.

SCM Brings a Brighter Future



SCM Chemicals Limited is part of the SCM Corporation, with headquarters in New York, USA. SCM is a major international manufacturing company with interests in pulp and paper, coatings and resins, food and consumer products, organic chemicals and metals, and titanium dioxide pigments. SCM is the world's third largest producer of titanium dioxide with close to 300,000 tonnes capacity.

In 1984 SCM demonstrated its increasing commitment to be a major international supplier of titanium dioxide with an additional investment of £90 million in Humberside, UK and Australia.

At Stallingborough we employ high technology, already the most advanced in

Europe, to produce a leading range of titanium dioxide pigments, the prime white opacifier for paints, plastics, inks, rubber, paper, and vitreous enamels. An additional investment of £30 million to expand our own chloride process will improve service to customers worldwide, whose production and profitability depend upon a secure supply of our pigments.

Whether we are producing 1 kilogramme in the laboratory, or 105,000 tonnes from our upgraded plants from 1986, we devote the highest degree of care and attention to our products: development, production, quality control, and service back-up to meet the needs of the Paint Industry.



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Industrial Paints 2

Ecology controls are changing the way products are coated

High-tech aid to protect environment

PRESSURES ON the paint industry have come not only from increasing costs of raw materials and tighter markets in recession but also from the ecological lobby.

Paint used to be mainly solvent. When manufactured goods were painted the coating was cured by stoving and three quarters of the "paint" went up the chimney. The cost of dealing with such effluent has grown as environmental controls have been tightened. There is also pressure to save energy by developing low-temperature curing.

Several trends have become clear as the industry has adjusted to increasing controls. All require high technological input and have militated against survival of smaller "stick and bucket" paint companies.

● An increase in the solids content of paint. The ultimate example is the development of powder paint, which is 100 per cent solids—a mixture of pigments and resin. The powder is usually applied by spraying through an electrostatic field onto an earthed object. Curing is by stoving although the object can be heated by electromagnetic induction, as in pipelines.

● Two-pack systems. The paint comes in two cans, when mixed, a chemical reaction starts polymerisation that transforms any paint into a continuous coating. Curing can be at temperatures as low as 70 deg C.

● Water-borne paints. Water replaces organic solvent as the

means of carrying the pigment and resin so it can be spread over the surface being painted. What goes up the stack is water vapour and steam.

● Curing by electron beam (E-beam) or ultraviolet (UV) radiation.

Most of the leading companies have opted to follow some, but not all these trends. Some companies have decided not to compete in powder while aiming to excel in two-pack systems. Others have tried to develop coatings that will cure at lower temperatures.

Development of water-borne systems is seen by many as the most important area for development, however, since it will keep closer to the industry's traditional technological skills. It also enables low solids paints to be retained, with advantages of good properties and colour consistency in thin coats. They spread easily and produce more marketable colours, particularly for cars.

By contrast, powder paint requires much greater effort and control at the formulation stage (unlike liquid paint it cannot be corrected after mixing) and requires higher temperatures to achieve good flow, even cover and curing.

Two-pack systems have limited pot life as they harden in the mixing vessel hours after the reaction.

Becker is one of the leaders in water-borne technology because the environmental lobby established itself quickest in Scandinavia. This could be important in the West German market, where environmental



Mr Brian Codling of ICI reckons the world market for vehicle repair at about 300m litres a year

controls on smoke emissions are likely to become the toughest in the world in an attempt to minimise causes of forest degradation.

ICI, however, has this month announced a breakthrough in water-borne paint for the motor industry, and intends to centre its sales assault on European markets at Wiesbaden, its West German subsidiary, based in Dusseldorf and Nuremberg.

To develop the system it calls Aquabase, ICI used its multinational clout by assembling a "world group" of its scientists doing joint research in the UK, Canada and West Germany. They solved the major problem of water-based paints, the effect of the ambient humidity.

The physical chemistry of Aquabase has what is called built-in rheological control, which enables the paint to adjust to atmospheric conditions and to dry consistently. The paint has also been designed so that viscosity during spraying increases on impact with the car body. This mimics conventional systems, where solvent evaporates during spraying, and enables the same control over paint flow.

Drying is assisted by three minutes' exposure to air at 60 to 80 deg C. This time should be halved with new drying tunnel design. The system has also been perfected for vehicle re-finishes.

ICI expects the main impact to be on new car lines, where painting and drying can be tailor-made, rather than modifications to existing lines.

POWDER PAINT is growing in popularity at the expense of liquids

Scramble for market share

THE MARKET for powder paint is growing by 15 per cent a year. But total industrial paint sales volumes have declined, then stagnated, throughout the recession.

Powder's new customers are coming from the liquid paint sector, according to Mr Brian Eyer, Croda Paints sales director.

The market in industrial paints has declined by 25 per cent in six years, he says. "Powder already has a 12 to 14 per cent share of the 75 per cent that is left, so it is fair to say that use of liquid paint has almost halved since 1978."

Croda, part of Croda International the UK chemicals company, is one of Britain's smaller paint companies, turning over less than £15m a year. Like others of its size, it survives by identifying market niches and trying to improve what it offers in those where it is already strong.

This has helped it take about 6 per cent of the UK powder market, and it claims leadership in the "hammer" and "antique" finishes popular on products such as gas fires.

Earthed

Such detailed marketing management is only a necessity in the scramble for a share in powder's widening markets, however. The larger companies are fighting here, if only to ensure that turnover is not lost if customers switch to liquid paint. The fight among the big companies could be to the death, with large corporate resources underwriting price-cutting in national and international markets.

"Nobody is making money out of powder," one leading figure in the industry observed. "In Germany, nearly everyone is making losses. Some of the large companies are hoping to win by attrition."

The advantages of using powder are largely environmental. The powder is sprayed on to an earthed metal object with an electrostatic gun which makes it coat evenly. Hard curing is done in an oven or, in the case of pipelines, by heating with electromagnetic induction, so the paint cures as the powder precipitates.

If the resin which carries the pigment is designed to coalesce into globules under heat, this creates textured, hammer or antique finishes. Otherwise, smooth, relatively thick surfaces result: common examples are aluminium windowframes and the colourful metalwork in high-tech architecture.

There is no solvent, so no gas effluent is created. Unused powder can be collected and used again, so there is little waste and no liquid effluent to treat. This has proved attractive to manufacturers of indoor metal goods, which do not have to withstand weathering.

But there are problems. Paint shops cannot be converted from "wet" to "dry," so new investment is required. And at the manufacturing end, formulation

has to be right at the mixing stage, with little margin for error. It is not like liquid paint, where colour or contents can be adjusted before canning.

Unless a company can find the sort of market niche not worth big companies' trouble, only large concerns will be able to survive in powder because of the need for high technological expertise, and the financial resources to survive low or no margins in the price war. So who leads?

Mr John Cox, of Macpherson, says: "We lead in powder coatings although there can't be a whisker in it between ourselves and International Paint. We have bigger manufacturing capacity and supply more segments."

But International Paint is playing for bigger stakes than the UK market, Mr Eyer Morris, chief executive, says. "In powder we are probably in the top three worldwide, with investment in new plant in Houston and South Korea."

"We have manufacturing operations in UK, Germany, France, Brazil (where we are market leaders) and Australia. Ahead of us in pipeline powders is 3M, but we are well established in heavy duty and thin films."

Meanwhile by taking over Goodlass Wall, Becker has strengthened its position in UK powder markets. It has not only added 5 per cent to its 5 per cent overall UK market share, but is doing so in the potentially heavy duty market, with the prospect of lucrative pipeline business.

The company says its powder sales are growing at 20 per cent a year, well ahead of market growth. It was straining its present capacity, in spite of

£800,000 invested in a new UK factory since 1980. But about 30 per cent of Goodlass Wall's capacity is spare, and this should take care of Becker's needs for three years.

Powder was one reason Becker wanted to buy Macpherson, which has plans for some niches as well as producing powder for larger volume markets.

Mr Cox says: "We intend to invest heavily in powder. We have acquired a site in Aldridge and should soon have the most modern production line anywhere."

Leadership

"We shall have capacity, but that is less important than flexibility. What you need is the capability to fill a wide mixture of small orders and for that you need modern plant."

"We have many customers who are moving to powder. We missed out on some specialised areas earlier but soon we will be able to service the specialised markets too."

Macpherson and International are neck-and-neck at about 14 per cent each of the British powder market. The Postens Group, however, can lay claim to leadership with about 19 per cent if the volume of its Synthia Pulvin company is added to the powder Postens sells to the metal shelving industry and to Thorn for appliances.

Synthia Pulvin, a proprietary powder coating system, accounts for about 35 per cent of sales. Mr Stephen Jacques, marketing manager, says: "We have 85 per cent of the architectural market, mainly aluminium windows."

Synthia Pulvin is largely responsible for the bright

colours on the aluminium window frames of modern buildings. But its most widely seen use is probably the white framework of the six-storey of silver glass curtain-walling on the office block at Milton Keynes central station.

Such coatings are marketed directly to architects and specifiers rather than window manufacturers or trade coaters. Croda, too, uses similar "back-selling" techniques to designers, pushing the potential attractiveness of finishes.

So design rather than manufacturing advantages is a key factor in some market sectors, although Croda has also developed a low bake resin system which cures at 100-120 deg C rather than the more normal 160 deg C.

"Energy for the ovens was costing more than the paint in some plants," Mr Eyer says. The continuing switch to powder has involved tools, agricultural drills, lawnmowers, filing cabinets, metal casings and general office equipment among other manufactured products.

All the companies involved see concrete reinforcing bars and steel joists as the next big worldwide market. Structural failure may be the eventual price of not protecting rebars, some of which are already beginning to corrode.

Some believe that legislation will force the issue, overcoming the unanswerable conundrum of whether the construction industry or its customers should pay for costlier components.

The powder makers probably will not care: whoever pays, here is a new market, not one replacing lost liquid volumes. This should mean real profit.

High performance resins for the paints industry from ICI Mond Division.

For over 50 years, ICI Mond Division has led the market in the development of resins for high performance paint systems throughout the world with 'Alloprene' chlorinated rubber.

Continuous research by scientists at ICI, working in close contact with paint manufacturers, has brought wider fields of application for this versatile product. As well as marine paint, the resin is also widely specified for the protection of land based steel.

Another more recent and unique development from the laboratories of ICI Mond Division is 'Haloflex', a vinylidene chloride/vinyl co-polymer latex.

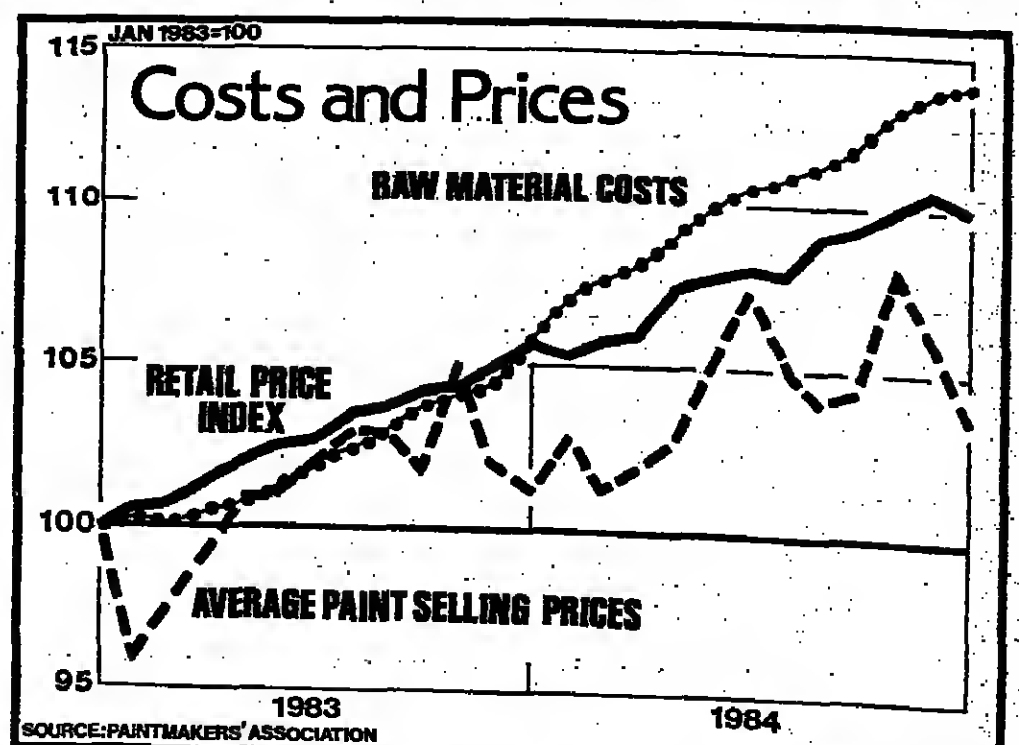
'Haloflex' is a high performance water-borne paint resin which has been used successfully to replace some conventional solvent based systems.

Developed principally with steel protection in mind, 'Haloflex' has proved to have a wide variety of diverse applications throughout the world; and has gained for itself a reputation for providing the basis for safe, cost effective, easily applied high performance paint systems.



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Paint companies' margins are being squeezed by rising raw materials prices. A combination of recession and over-supply is preventing compensatory price rises. This is helping to fuel rationalisation of the industry as companies drop out of markets where they are not strong enough to generate worthwhile volume.

Industrial Paints 3

Vehicle repair, one of the most lucrative sectors, is adjusting to a \$1bn deal

Takeover shake-up

REPAIR OF damaged vehicles is one of the most important and lucrative paint markets in the industry.

"People are not only going to continue to own cars but also to crash them. Vehicle re-dish (VR) will remain very big business," said Mr Bill Collins of Berger Britain.

Mr Brian Codling, general manager of the VR business area for ICI, reckons the worldwide market at about 300m litres of paint per year. An average price of \$1.20 makes it worthwhile for the paint giants to fight for every tenth of 1 per cent of share, for even such a morsel is worth about £1.2m.

This is why the \$1.2m purchase last month of the U.S. paint and ink maker Inmont by West Germany's BASF is important.

Inmont and BASF were among the eight paintmakers controlling more than 70 per cent of the world market. Inmont was second to Du Pont, the U.S. chemicals multinational with a 9 per cent share, and BASF seventh with 7 per cent, some sources say.

Combining the two shares should theoretically make BASF world market leader over Du Pont's 15 per cent.

Falling

Those shares may still seem small enough for the world situation to appear competitive, but reality is different because of geographical variations. In North America, which comprises about one-third of the market, Du Pont is believed to have a 36 per cent share and Sherwin Williams about 21 per cent. BASF was doing little more than buying Inmont's share, thought to be about 13 per cent.

In Europe, another third of the market, BASF probably had an overall 15 per cent, to which it has now added Inmont's estimated 7 per cent. The Hoechst group, which includes Herberts and Berer, was the leader, but probably had less than 20 per cent.

In Britain, BASF owns Glasurit, which had 8 per cent of local markets in 1983. Last year it bought the UK operations of Valentine, which had a

falling 11 per cent of the British market (its share is thought to have halved in 10 years). Inmont in the UK was about the same size as Glasurit.

Theoretically, BASF has agglomerated about 27 per cent of the British market, giving it leadership over ICI, which claims between 22 and 25 per cent. But this is almost certainly not the case, because mergers lead to rationalisation and much of Valentine's share was shaky as a result of older technology and less well-founded distribution.

Thus ICI says that it did not want Valentine in the UK when the group was up for sale last year, contenting itself with buying Valentine's operations in France. However, Monopoly Commission considerations also affected the decision not to buy.

Berger says that the breakdown of British market shares is now: ICI 24 per cent, Glasurit 20, Berger 15, Ault & Wibour (owned by Sun Chemicals) 16, and Sikkens, the Dutch paint company, 10. This amounts to 88 per cent of the British market.

Other sources would give ICI and Glasurit a point or two more, mainly at Sikkens expense, and swap Berger and Ault & Wibour's places.

ICI is overall market leader outside North America and Europe. This also comprises a third of the total market and ICI, which manufactures in 20 countries and sells in 47, is believed to have about 15 per cent.

There are marked regional variations, with Berger claiming pre-eminence in total paint markets in areas like the Indian subcontinent and the Caribbean. But overall, the combined sales of BASF and Inmont give the West German group second place, and put its share well into double figures.

ICI is not taking these developments lying down. Long before the Inmont takeover it had shaken up the management of VR with the appointment of Mr Codling, whose image is rather like a promising heavy-weight. The new BASF group will make his job tougher but the key elements of strategy have already been defined.

The reverse trend securing a firmer worldwide base by improving penetration of U.S. and

Continental markets and upping investment and expenditure on research and development.

ICI is spending £2m over two years on investment for the European market, including training for applicators (operators responsible for applying paint), new colour and development laboratories and a new factory at Stowmarket, due to open next year.

Narrow

Having the best colour-matching facilities is a key R & D objective. Ironically, Mr Codling says that penetration of the British car market by foreign companies is going to prove an advantage because the range of vehicles and paints is so wide as to give any British-based company the best finishing "library" in the world.

By contrast the Japanese, who have a narrow range of imported cars to learn on, are hardly in the VR market. Their colour consistency on new cars is sought after by European paintmakers anyway.

Mr Codling says: "The number of colours in a place like Japan is very small. Complexity of colour has been increasing. There were 10 colours for cars in 1948, 12,000 in 1971 and 26,000 in 1984."

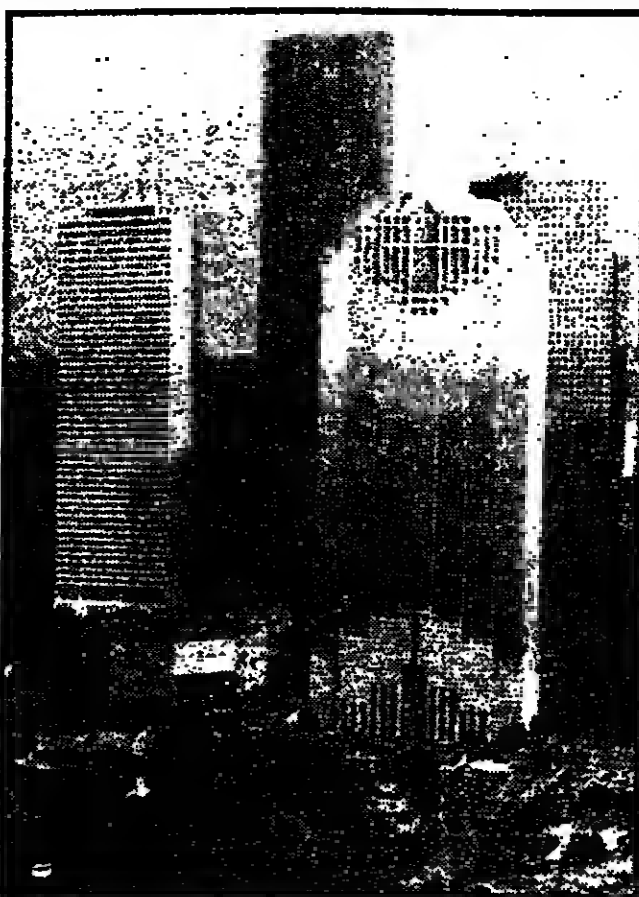
"In 1971, 34 per cent of colours were available via mixing schemes. By 1984 the proportion was 80 per cent from 50 basic."

All the companies are spending a lot on mixing systems and training, which means high technology will be an increasing requirement among applicators, spelling doom to the traditional British "under the railway arches" businesses.

This will almost certainly push up the price of repairs, with discomfort to insurance companies and temptation among applicators to skimp on health and safety. Therefore a search for safer, more economic paint systems is also a high R & D priority.

ICI's new water-borne paints could be important in the long term, though the technical and financial resources needed illustrate why the VR business is now in the hands of so few big companies.

And with stakes so high it is no wonder BASF's acquisition of Inmont is so unsettling.



Most of the curtain walls in central Houston are being coated with Penawalt resin systems

FLUOROCARBON paints, with their indestructible properties, are being offered in a new form

Sprayers aim to blow away powders

FLUOROCARBON-based paints are set to enter a new battleground: Sigma Coatings, the Petrofina subsidiary, is pushing the idea of using them in spray coating as well as in coil coating where they have already established a strong market position.

Coil coating, a roller-based system of painting, is the principal means of applying these paints.

The fluorocarbon resin which carries the pigment is polyvinylidene fluoride (PVDF), of which the U.S. company Penawalt is almost the world's sole supplier.

The resin is expensive but practically indestructible. This has led to superior weathering for steel coil coated with only thin layers of paint. Any colour or hue can be guaranteed also

not to fade even in desert sun. Accelerated weather testing even suggests that the forecast time of more than 30 years to first maintenance may be pessimistic.

Such properties have led to most of the curtain walling on downtown Houston's new skyscrapers being coil coated in Penawalt-supplied resin systems. The coatings can make relatively low-priced steel sheet look like more expensive anodised aluminium while weathering just as well.

Mr Louis McCulloch of Sigma says: "Our product has been designed for spray, and is not an offshoot of coil technology, which is the case with our only likely competitors — ICI, Becker and PPC. It's a very small market but we have

THERE HAVE been significant developments within Berger's UK operations in the last two years. A thoroughgoing reorganisation has been taking place, with top managerial changes and segmentation of the business to match markets.

Coupled with extensive modernisation, Berger now expects to consolidate and expand across a wide range of industrial coatings. Competitors, who two years ago were openly questioning Berger's prospects, are now being much more careful in what they say.

The promotion of Mr Bill Collins to supervising director of Berger Britain is part of the change. He made his name in one area where Berger has been highly successful — as chief executive of Cuprinol. At the same time, Mr Philip Medcalf has become marketing director for the UK region, from doing a similar job in overseas markets, and Mr Stanley Hough has joined from ICI to run industrial coatings.

This is not to say that Berger was not successful before, for it has many outstanding products. But Mr Collins acknowledges that its largely centralised management structure was not well suited to competing effectively in an era of increasing

PROFILE: BERGER BRITAIN

Divide and conquer

market segmentation. The result is that at Berger Britain — the new name for Berger in the UK — there are now eight profit centres, each with its own marketing team. Three of these are in consumer markets — decorative, retail and woodchip papers — but the others are all aimed at specific industrial segments.

Industrial coatings, with automotive and vehicle re-

access to Hoechst technology that brought. Today Berger turns over £250m worldwide via 45 companies in 25 countries. It defines its geographical market as the UK, the Pacific and the Caribbean — much of the old British Empire. It keeps out of the rest of Europe, leaving that to Hoechst.

Berger Britain and the Australian sector are about of equal size and account for £260m, 70 per cent of it decorative and retail sectors. Mr Collins admits that it was marketing weakness in the decorative areas that caused the loss of share that prompted Berger's changes.

But that does not mean that Berger has been content to rest on its industrial laurels, as the segmentation of the company shows. The investment programme also proves the point, with closures of old plant in Newcastle, Dagenham and Stratford, East London. A new London factory has been designed to enhance quality and consistency, the latter being crucial for automotive paints applied by robots.

This, combined with Hoechst's electrocoat technology, has given Mr Collins the confidence to make an important prediction. "We will get Nissan," he says.

finish at its core, is the biggest, and Cuprinol, the market leader in wood protection, remains a profit centre in its own right. The other three are elastomers, resinous chemicals and traffic markings. The chances are that the white lines on the road and the reflective paint on traffic cones came from Berger.

The present Berger group was formed when Berger Jensen and Nicholson acquired British Paints in 1969. A year later Berger joined the Hoechst group, owner of the German paint giant Herberts, with all the

U.S. paint company is promoting its Duramar fluorocarbons directly to specifiers and Penawalt is vigorous in explaining PVDF properties to architects. The range and subtlety of available colours and their effect on design standards will influence some of them.

The other key to the market lies in availability of the right sort of trade-coating capacity: the system requires high stoving temperatures to cure the coatings and such facilities are not available in smaller workshops.

Mr McCulloch says that when sprayed PVDF was specified for part of Gatwick Airport's new terminal the work went abroad because of a shortage of such capacity in Britain. It may need investment by a paint company to help a UK coater into the marketplace.

Architects and specifiers hold one of the keys to the market's development. PPC, the giant

"We have a range of beiges and whites," Mr Jacques says. "We can formulate any colour anyone wants. However, we expect spray-coated PVDF to become popular with some architects who want matt finishes, though we introduced a matt product ourselves last year."

Architects and specifiers hold one of the keys to the market's development. PPC, the giant

It's amazing what you can get from a paint company.

Berger Britain have been making paint for more than 200 years, showing an unrivalled belief in high quality, customer service and imaginative product development. They still make paint, but the eight companies that make up Berger Britain these days make a lot of other things too.

Berger Elastomers produce high performance sealants and encapsulants for a range of industries. These include the aerospace, automotive, civil engineering, electricity and gas distribution, electronic and insulated glazing industries. A full technical advisory service is available to customers.

Berger Traffic Markings are responsible for Easymark. This is an aerosol based lining system, enabling untrained operatives to mark out workshops and small car parks. The Superliner Heavy Duty Lining Machine is used for highway marking. Contramark is the only temporary road stud approved for use on motorway contraflows.

Firefly safety systems illuminate escape routes from buildings in what can be critical minutes following light failure. Available as ready made signs or as a water based emulsion paint the pigment has a special light-retaining structure charged in just a few seconds from normal light sources.

Cuprinol is in the business of preservation, decoration and renovation with over 50 years experience. Twenty years research has led to the range of Berger Cuprinol paints and stains for wood which are resistant to blistering and peeling. Wood preservers and treatments combat wet rot, dry rot and woodworm. Vacuum pressure treatment increases the performance and credibility of timber as a construction material.

Synthetic resins, basic to the manufacture of surface coatings, printing ink, adhesives and polymers are being improved by Resinous Chemicals to meet the technological demands of diverse markets including the oil industry and the world of aerospace. A recent development is a new range of industrial adhesives.

PGW is amongst the leading distributors of decorating materials in the U.K. From 85 depots positioned strategically it gives a 48-hour one stop service to industry for protective and decorative coatings.

Arthur Johnson stock the widest range of quality woodchip wallcoverings available in the UK and also a wide range of 'ink embossed' wallpapers, softly coloured yet very durable offering real value for money to property managers.

Of course, as we said earlier, Berger still make paint. Brolac, made by Berger Decorative Paints provides a complete range of top quality paint products for the professional specifier. Top quality protection and decoration is backed by the Brolac Advisory Service for specialist technical and colour scheme advice.

Berger Industrial Coatings operates through four divisions to focus on the needs of different industries.

Complete finishing systems for the automotive industry are developed to provide both corrosion protection and customer appeal.

Up to twenty-five thousand different colours to match every car on the road are available from the Berger Standox, Viton, Superfleet and the new KH painting systems supplied to the vehicle refinishing industry.

Plastics and coil coatings are just two of the high technology products which support the company's claim to provide a coating for almost any industrial purpose.

Protecton supplies high performance coatings to on-shore and off-shore installations and provides a ten stage technical service to optimise system selection for the control of corrosion, abrasion and fire.

Every company in Berger Britain is a leader. Their combined manufacturing, scientific and marketing skills are backed by the massive technical resources of the world wide Berger Group and Hoechst, one of the world's largest chemical groups.

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Industrial Paints 4

Plastics: bumper time for colour co-ordinating and sprayed textures

Leathering for cars

THE FRONT and back bumpers on the Rover 200 series of cars are an important step forward for paint. They are made of plastic and when the new Rovers were at the final design stage in 1983, Austin Rover asked ICI if a way could be found to paint them.

This was felt important to the car's chances. It would enable stylists to achieve a "co-ordinated" look, matching the bumpers to the rest of the car. Colouring the plastic during manufacture would not work because of consistency and matching problems.

The plastic is a modified high-density polypropylene which is shatterproof, deformable and tough, making it ideal bumper material. The mould is made

by Honda and the plastic by ICI in Britain and Mitsubishi in Japan.

When it was found paint would not stick, it took ICI a year to develop an adhesive promoting primer that would adhere to the plastic. The paint then sticks to the primer.

The result is that apart from a little cosmetic trim, Rover 200's are the same colour all over. Mr David Clark, technical service manager for ICI automotive paints, says the implications are likely to be considerable.

"The car bumper is the thing everyone is learning on. Car-making is going to go back to a frame on which panels and bolt-on wings are hung.

The frame will be steel for safety but the wings and panels can be made of anything."

Use of plastics inside vehicles, where materials are usually more easily painted, is also increasing.

Stylists like plastic because you can make shapes which cannot be produced out of metal," Mr Clark says. "There is less weight and engineering costs are lower because you can avoid operations like eight-stage bending and welding."

"It also means faster retooling for new models and it is very much easier to modify the mould."

The right paint can also make all the difference to plastic's image. "The plastic car won't be nasty and it will be cheaper because of significant savings on material costs and energy," Mr Clark says.

The latest coating for plastic being developed by West Germany's oldest paint company, Schramm Lacke of Offenbach, is called Soft-Feel. Sprayed onto injection-moulded parts, it can make plastic look and feel like leather.

Schramm is part of the Grebe Group and technical staff at its stabilisation company, Weiburger Lackfabrik, were last month passing round the boardroom a new additive for Soft-Feel—a perfume that will make it smell like leather too.

Coating

The new paint is already being supplied to Volkswagen-Audi for an injection-moulded interior part giving a leather-like "grain" in the plastic and a "stitching" seam.

A thin primer smooths injection marks on the moulding and an 80-micron layer of Soft-Feel is sprayed on. This cures in about 20 minutes when stored at 80 deg C producing a film thick enough to feel like a layer of leather. But it is thin enough not to fill the "grain" marks.

Ford's Berlin plant has taken a supply and talks are taking place with Ford UK. The coating can also be used on plain plastic to give a texture like velvet. Schramm expects to replace laminates in car interiors with the coating, as well as taking market share from injected foam.

Herr Hans-Harald Grebe, Schramm's owner and chief



Colour matching for the new plastic bumpers on Austin Rover cars was achieved through an ICI development

executive, says: "We spent nearly three years developing Soft-Feel. We can also take it into furniture, radio, TV and desks. Secretaries complain of bruising their knees on modesty boards—this will stop that."

Becker, the Swedish paint group, also sees painting of plastics as likely big business. Mr Sten Skoog, general manager responsible for Becker's European marketing, says: "We put a lot of resources into this area in the mid-to late-1970s and know a lot about it."

The company has beefed-up its research and development department, now headed by an expert in the field.

Mr Geoff Longstaff, who heads Becker's British operations, says: "We expect to see markets open for painted plastics in radio, TV, computers and electronics."

Like ICI, the Macpherson Group expects to be able to use its plastics compounds to enhance its approach to the industrial market. Mr John Cox, head of Macpherson Industrial Coatings, says: "It's more than painting. We are looking at the whole concept, from raw materials to the final coating and offering total technology."

"We have about 20 applications on trial with various companies. We expect this to be a big area for growth."

Because paints are put on to plastic they have to be cured at relatively low temperatures. This forces chemists to develop a coating that will be robust enough for many industrial uses, but the energy savings in production are considerable. Storing temperatures for paint on existing bases such as steel may be 50 per cent higher. This will reduce costs of

finished goods. Austin-Rover is trying to stay in business by using technology to compete and the Rover 200 plastic painted bumpers are the first of their kind. ICI is also working on a plastic fender for the Maestro.

Mr Clark admits that a lot of smaller paint companies have been painting plastics for some time—but their prices have reflected their lack of economies of scale.

"We are in high-tech, high-volume markets," he says. The advent of the big companies should move the painting of plastics into a new era.

PROFILE: CROWN

Concentrating on tomorrow



MR JOHN ASHER, director of Crown's Industrial Division, is the first to admit that sales volumes have been static in the company's main markets for the past few years.

"We are in areas where we have a knowledge of the market and how to service it," he says. "It would be wrong to say we have sailed through the recession but we have come through in fine shape. We have concentrated on tomorrow's technology and did not try to defend smoke stack industries."

Rationalisation of the industry, he says, is solving the old problem of too many paintmakers in too many markets. "There has been a move towards increasing specialisation. Not a single paint supplier can afford to cover everything," he says.

In Crown's case this has meant concentration into four main areas of industrial business—coil coating, water-based materials, radiation cured systems and powder. "After that we're in market niches and don't fight in bulk markets," says Mr Asher.

Coil coating is, in fact, steady business for Crown because it is one of the main suppliers of plastisol to British Steel. This coating is the workhorse of the coil industry in Britain, where the steel coil it protects is cut into lengths and converted into profiled claddings for the construction industry.

But Crown is also big at the small end of the coil industry as one of the pioneers of high performance, heat resistant coatings for cookware and bakeware. The coating is applied to unrolled steel coil and cured at high temperatures. The product is then pressed out of the coated steel, with no need for further finishing.

Crown put a lot of work into these coil areas in the early days of the industry's growth and has seen it pay off. It has done similar developments on radiation curing and water-based materials in the areas it knows well—clear finishes and lacquers for paper, wood and plastics, and laminating adhesives.

The set of benefits this brings to adhesive customers is obvious—a cost of 2.5p per sq metre against 3.4p for solvent-based systems. This has seen use of such water-based materials grow from less than 1 per cent of the market in 1976 to nearly 10 per cent now. Mr Asher sees the figure at 16 per cent in the early 1990s. Crown expects its work to give it a lucrative share of this.

Meanwhile, Crown's profile is very high in some other areas. One of the niches it has identified is the painting of concrete with maintenance-free coatings (the rain does the cleaning). The attractively refurbished Birmingham Telecom Tower is one of the first, and most prominent, examples.

The company reckons it will take five years to establish painted concrete as a new market, but with many existing concrete structures and buildings looking decidedly tatty these days, it may take off faster than that.

PROFILE: INTERNATIONAL PAINTS

Marketing shift may be leap in the dark

X International Paint

IN A significant shift of marketing strategy, International Paint has set off in pursuit of the small business sector, which it says is worth between £50m and £90m a year. Like most paint giant's, International has been interested only in supplying large volumes. The move reflects the depressed state of the market.

The company has put £3m into centres in Newcastle, Birmingham and London, each of which has a computer system for colour control and customer accounts. Other centres are planned to cover the whole country.

The technology makes it economic to mix and supply a wide range of colours in various types of paint at competitive prices but in small quantities. A range of powders has recently been added.

Although each centre has been designed with what the company calls an "up-market" shop front that allows over-

the-counter transactions, most customers have their paint delivered under normal trade credit terms. International claims a 24 to 48-hour service and quotes small business customers who say the new centres have eliminated problems of availability and delay.

The move will be seen in some parts of the industry as a threat to smaller paint companies which exist because they are willing to supply small quantities, often to customers as small as themselves. Lack of economy of scale is usually reflected in price and delivery times, with special colours or requirements costing more and taking longer.

The centres are also different from other large companies' "trade" outlets, which are usually concerned with sales of decorative paints rather than industrial coatings. The change is to International's marketing mix, creating new places of sale to reach an untapped market.

The company's vagueness about the potential size of the market, however, indicates that this could be a leap in the dark.

PROFILE: DONALD MACPHERSON GROUP

A fight to the Finnish



THE Donald Macpherson Group is most widely known for the decorative paints it retails through Woolworth, but one-third of its £120m-plus turnover is in industrial coatings. This was a major attraction in the takeover battle for the group last year.

The fight ended with victory for Tikkurila, the paint subsidiary of Kemira Oy, the state-owned Finnish chemicals corporation, but most of the early running was made by the Swedish paintmaker, Wilhelm Becker, which dropped out when the conglomerate Yule Catto entered the fray.

Tikkurila then swooped at the last minute with a £25m offer—a price which Becker and other leading paint companies still find astounding for a company that made only £1.7m pre-tax profit in the 14 months to the end of 1984.

But Macpherson sales were well spread last year—£85m in the UK, £15m in Europe, £11m in the Far East and Australia, slightly less in the Americas and nearly £2m in the Middle East, Asia and Africa. For Tikkurila, flush with cash and profitability and anxious to burst out of the Nordic market, Macpherson remains a very cost-effective way into UK, Euro-

pean and world industrial paint makers.

The Finnish company is determined to use Macpherson as its western European springboard. It is already a major exporter of automotive coatings to the Soviet Union.

Next week, a year after completing the takeover, reorganisation of Macpherson's former single industrial division will be completed with the creation of four separate market-orientated companies. These are: woodfinishing and paper coating; powder; wet metal and other general industrial coatings; and urethane elastomers and polyester plasticisers.

Powder, which is easily exportable, is seen as a critically important world product and Macpherson already claims to make a quarter of Britain's total production, disputing claims for leadership in manufacturing with International Paint. Both companies are now investing heavily.

Macpherson is also consoli-

dating its grip in the ACE market—the heavy duty paint for agricultural, construction and earthmoving equipment. In March it announced it was buying ICI's business and dedicated technology in ACE.

At the same time, Tikkurila has said that there will be considerable investment in Macpherson plant to improve productivity and profitability.

Mr Tony Close, company secretary, says: "Tikkurila is very strong on automated production and high technology production techniques. Many experienced managers would be amazed at the standards in the Finnish factory. The intention is to bring UK plant up to these."

Mr Close says that Tikkurila also intends to put a lot of pure R & D into Macpherson, which traditionally has used its scientific staff as technical support in the marketplace, rather than in fundamental development areas.

Research areas where Tikkurila is strong include paint porosity, which has led to development of efficient vapour barriers. Water-borne systems are also being studied, as are ultraviolet curing of paints and varnishes, resin production methods, corrosion prevention, and low-bake stoving enamels.

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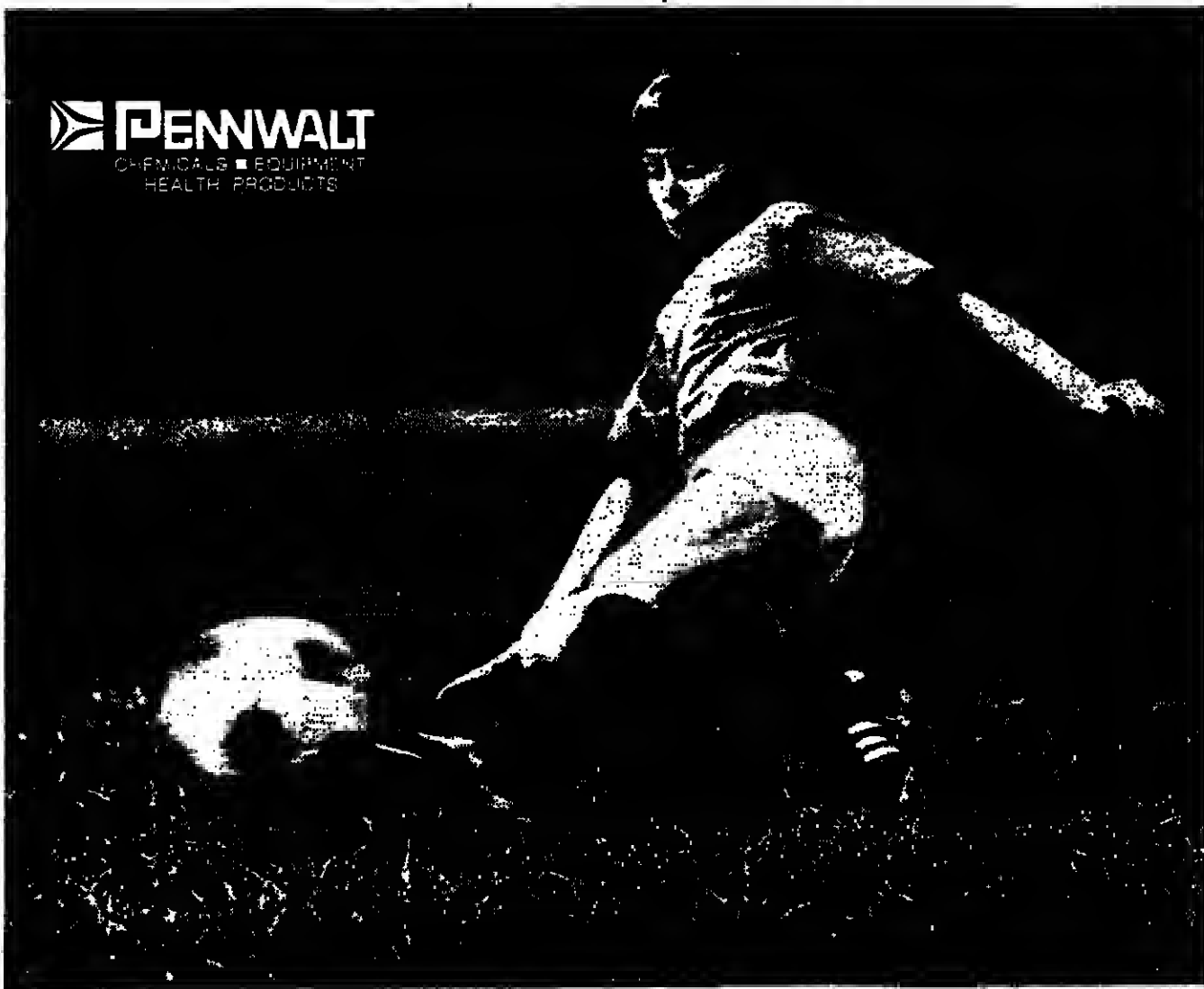
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THE ARTS

Architecture/Colin Amery

The BBC needs Foster's foresight

Last week the architect Mr Norman Foster received a telephone call in Hong Kong from Mr Stuart Young, chairman of the BBC, who gave him the news that plans to build on the Langham Hotel site opposite Broadcasting House had been abandoned.

Foster has been working for three years on plans to build a new broadcasting centre for BBC radio. He was selected from a short list, when the late Lord Howard was the BBC's chairman, on the strength of his firm's undoubted skills in solving the complicated problems of inserting highly serviced buildings into existing urban areas.

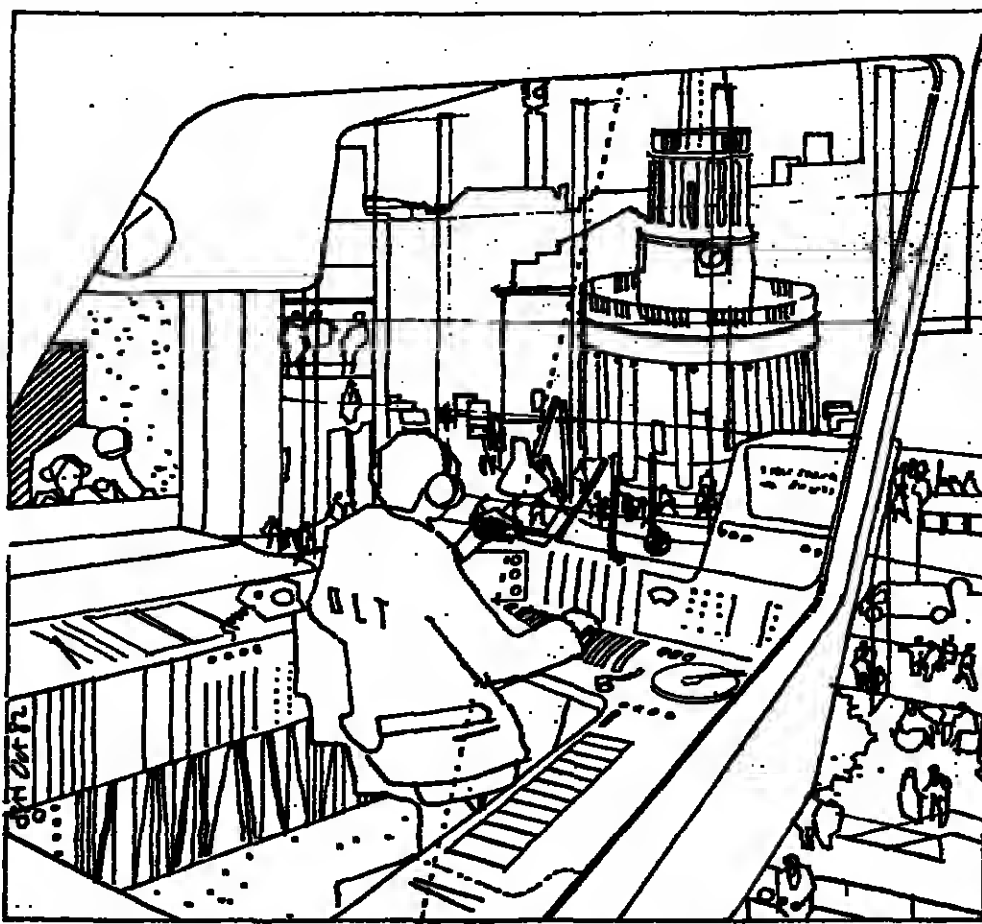
Foster Associates have produced some of the most interesting new structures in the world. In Norman Foster they have a man who is a brilliant problem solver. He applies his own almost obsessive fascination with the advance of design technology to almost any problem and usually produces a revolutionary answer.

The BBC, in its wisdom, has decided to buy 16 acres of land at White City. It is a site with room for expansion, where new buildings can be speedily erected—but it is a suburban site, something of a retreat from the metropolitan presence now enjoyed by BBC radio at the hub of the capital.

There is an awful irony in the decision for Foster Associates. They have been analysing the BBC's needs in some detail and were naturally critical of the Corporation's occupation of some 1m sq ft of office and studio space at some 20 different locations in London. The Langham site had its problems but Foster Associates had shown they were not insoluble. In their solution they had demonstrated that in the sensitive heart of London a new building could be built which would have been an elegant and existing addition to the capital, although a tight squeeze.

Foster Associates' approach to architecture can be seen and thoroughly understood in a major exhibition that opens today.

Foster Associates—Six Projects to be seen at the Sainsbury Centre for the Visual Arts at the University of East Anglia, near Norwich until September 11 (opening hours are Tuesday to Sunday, 12 to 5 pm). I highly recommend a visit because it presents a unique opportunity to see Foster's own Sainsbury Centre, which was completed in 1978, and to explore the development of the practice's work in the setting of that remarkable building.



How the Langham Hotel site might have been redeveloped for the BBC. Norman Foster's drawing shows how he had intended to make broadcasting visible and in tune with the city.

Alas, the BBC proposal, which had reached a state of preparedness to be submitted for planning permission, will not be in this exhibition. I hope very much they can be unveiled to the public as soon as possible because they are a particularly relevant example of "architectural problem-solving" within the city and a demonstration of the development of this same and rational practice.

When they are shown I hope that the preliminary response—an account of the architect's initial approach to this technically complex problem—will be prominent alongside the more finished models and plans.

Foster's particular skill has been to explore the development of technology while simultaneously applying this research to his current building projects. It is important to remember that Norman Foster and the late Dr Buckminster

Fuller collaborated on futuristic projects that could yet influence our environment. The "Climate" is such an idea—the enclosure of the maximum amount of office space under the minimum envelope. Internal planning allows for the creation of a micro-climate. This is exactly the kind of project the Docklands Development Corporation should be examining if they continue with plans to build large office centres on the Isle of Dogs.

Buckminster Fuller and Foster have also completed research on the "Autonomous House". This is a double skin dome with warm or cool air circulating between the two skins. The design is a glazed and half-solid and rotating independently can follow the path of the sun in the day and be closed up at night. While neither the "Autonomous House" nor the "Climate" have yet been built

the ideas fuel the current work of the practice. It is in this ability to look at developing technology in all fields (Foster is fascinated by aircraft design, for example) and transfer it to current building problems that would have made Foster ideal for the BBC. During his briefings with some of the BBC staff they became used to hearing him say, in answer to any problem, almost monotonously, "I hope the BBC will not now turn to some cheapjack commercial architect to run up insignificant new premises for them at the White City. As the leading broadcasting service in Europe in terms of quality of their product, the BBC directors have a perfect opportunity to continue their search for quality into the architecture and design of the new White City."

The six schemes on show in the Sainsbury Centre are all violently in Paris two years ago. The Almeida is presenting a very thorough survey of his work, culminating in a staging of his opera *Kopernikus* on July 5 and 6. *Shiraz* did not quite prove to be the appetiser one hoped for, impressing more by its confident dramatic shape than the freshness of its language.

The style is closest to Messiaen, whose *Vingt Regards* seems to be the model behind the dense choral toccata that frames the work and whose modes of limited transposition surely generate the delicate rootless counterpoint that forms its point of repose. The piece undoubtedly confirms Vivier's ability to project his music with considerable force; whether it will survive comprehensive exposure over the next two weeks remains to be heard.

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Beauty and the Beast/St. John's, Smith Square

Max Loppert

Adam Pollock's *Musica nel chiostro*, Festival, based on the Italian town of Batignano, has made a habit of sending various of its wares for London sampling. The latest, given three performances at St John's, Smith Square this weekend, was not one of the 17th or 18th century operas on which the festival has in the past concentrated, but a new work—*Beauty and the Beast*, an opera in two acts by Stephen Oliver, a regular Batignano hand.

Oliver took as his subject the version of the legend by Mme de La Fayette (Beaumont); for the 1984 Batignano premiere he set the Italian translation by Carlo Collodi, for London his own Englishing of Collodi. Instead of reworking the tale into a form of dialogue libretto, he has retained in full the original text, which the cast of six deliver both in and out of their own given characters, and which develop passages of direct speech where the original permits.

The aim was clearly the creation of a modern *prolo* in the sense of which Monteverdi's *Il Combattimento di Toncero* e *Clorinda* can be recognised as ancestor and direct model. A once-upon-a-time world is immediately conjured up, yet the

ground plan of the setting allows the narrative to flower at key junctures into little "numbers", ensemble moments of musical-dramatic reflection.

Oliver has glanced back to Britten's *Church Parables*, to masque and madrigal forms, even (perhaps) to the medieval Passion play, and fashioned his various practical requirements, dramatic compulsions, and musical influences into an impressively fluent music-theatre structure—he is, after all, one of the most prolific opera composers now living, and the sheer competence of *Beauty and the Beast* should come as no surprise. The orchestra of eight (including two percussionists) limns motifs and textures associated with various characters; the idiom of the score moving between non-tonality and semi-tonality, is unified with the same expertise shown elsewhere.

It's an immensely skilled product, indeed, but one that leaves little in the way of personal fingerprint: Oliver, the Richard Rodney Bennett of nosed music, is heard, admired, and quickly forgotten. In the Batignano doister the show was lent (according to report) an extra ounce of magic by the silling of

its scenes in diverse locations, to which the audience migrated (the "stereophonic" planning of instrumentalists was an essential part of the atmosphere). For St John's the highly mobile production by Graham Vick, in Russell Craig's spare design, had to be penned into a single space; and though this was achieved with some artistry, the result seemed much less normative to the material than it must have at Batignano in the warm Tuscan night air.

And frankly, after having previously sat through *Euridice* and *Le Dori* given by the same forces in similar style, I'm getting a little bit tired of performances which for reasons of arty theatrical device remain either invisible or verbally incomprehensible to half its audience at any particular moment. The saving grace of Friday's showing was an excellent account of the music under the baton of a quite exceptionally gifted and attractive young cast, who must all be named equally: Anne Mason and Robert Dean in the little Henry Clifford (Merchant), Linda MacLeod (Fairy), and Louise Kennedy and Christine Boies having a whale of a time as the *Cenerentola*-style wicked sisters.

Fernando Bujones/Covent Garden

Clement Crisp

In a week that began with the *Fatuous Eurovision Young Dancer of the Year* contest, continued with the Dublin City Ballet, and culminated in a day of sudden glumness, it is good to record that light, truth, warmth were at last in evidence when Fernando Bujones stepped on to Covent Garden's stage. Dame Marie Rambert coined the phrase *belle danse*, on the analogy of *bel canto*, to describe the kind of beautifully rounded, full-toned classic dancing that Mr Bujones showed us on Friday night in his Royal Ballet debut as Solor in the Shades scene from *La Bayadère*.

What we see with Mr Bujones is a central image of the classic dancer, to an ideal physique — perfect legs and feet; grand placing of head and torso — has been given the purification and distinction of training at the School of American Ballet. There results a ballet in execution which informs every movement, from astounding bravura steps to the simplest gesture. The silhouette is pure, noble in repose, and what sincerity are the "Indianisms" of the role shown to us.

And then he dances, beating

cabrioles of such leisurely clarity that time seems slowed down; throwing off *coupés* *doubles en tournant*, *entrechats*, *doublés* *en tournant*, embellishing aerial steps with a smooth flow of dynamics, a control of effects that speak of technique of surpassing excellence and polish.

There was, of course, an element of showing off in certain of Mr Bujones' interpolations, rather in the way Rakhmaninov would make glittering pianists decelerate to some simple piece, but this is part of the history of the role itself, and properly part of the excitement engendered by dancing so blissfully easy, clear, so that we rejoice in such mastery.

There were two drawbacks to otherwise, enhanced by Mr Bujones' understanding of Solor's character, since he has danced in Makarova's full-length staging for American Ballet Theatre (where he had his own part), and in a handsome partnership with his Nikiya, Bryony Brind, who is too tall for him, and could nowhere share his authority. The other was the continuing uncertainty of Isiah Jackson's view of

Minkus' score, which was made to sound raucous and erratic in rhythm.

The cascade of shades was a procession of sometimes mixed blessings, not as physically uniform as they have been in the past. (I recall that it was 10 years ago that the Evening Standard award for the year's outstanding achievement in ballet was given to the corps de ballet for their appearance in just this work.)

The evening also brought a new cast to David Bintley's *Consort Lessons*. The male quartet does not yet have the buoyant assurance of their predecessors, but this can come with experience in their roles. Chief pleasures were the alert sparkle of Nicola Roberts in the first movement and Fiona Stape, who was what was called the ballerina of the piece. In her every interpretation I sense the intelligence of Miss Chadwick's dancing, in the way she shapes the development of choreography, in the assurance of her movement, with no uncertainties to a handsome technique. To see her simply stepping into an arabesque, or cleaving through a phrase of movement, is to watch an artist skilled, lovely, youthfully radiant in the bright morning of her career.

Nelly Miricioiu/Wigmore Hall

Andrew Clements

Miss Miricioiu's enormous talents have been hailed more than once on this page. But though her career in the opera house goes from triumph to triumph, she is only just beginning to enter the world of recitals. She gave her very first at the Goldsmiths' Hall in March, when Max Loppert described her recital giving as "an art in its infancy," and the same partially formed impression was left by her appearance at the Wigmore Hall on Thursday when, accompanied by David Harper, she delivered a widely varied programme.

That very variety made her present shortcomings all the more obvious. For as the music tended more and more towards operatic treatment, her performances became correspondingly more coherent and alive. The second half of

Granados, Respighi and the Proch Variations (evidently her forte piece) was progressively more impressive while an encore from Puccini's *La Rondine* was quite superb, with the voice and dramatic intensity at last fully engaged.

At the opposite pole were Nelly Miricioiu's Duparc and Ravel, lacking in poise and shape and scattered with vocal sounds of most dubious provenance. The Rakhmaninov *Vocalise* showed the beauty of her voice as an instrument, though even there the phrasing and occasionally the intonation faltered. Some darkly coloured phrases in Ravel's *Cinq Melodies populaires grecques* hinted at a degree of vocal characterisation that could soon be used with more confidence; at the moment however, she evidently only feels able to attack Italian repertory with such a degree of stylishness.

The Almeida Festival has moved on from American experimentalists to living French composers. "Aspects of French Contemporary Music" is another of the strands woven into this fascinating, multi-hued programme. The ensemble L'itinéraire visited the Rudolphine Festival two years ago, but amazingly, for it is one of the foremost French music groups, had not appeared in London before its concert at the Almeida Theatre on Friday and Saturday.

Friday's programme proved not to be an especially satisfying one. It lacked coherence and direction, the inclusion of Debussy's *Syrinx* and Varèse's *Density 21.5* indifferently played replacements for Boulez's flute *Sonatine*, emphasised the bitness. Pascal Dusapin's *Piece for solo cello*

L'itinéraire/Almeida

Andrew Clements

proved to be a maudlin essay in quarter-tones and fractured lyricism, which signalled his own demise several minutes before it arrived.

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Dublin City Ballet/The Place

Clement Crisp

It was perhaps characteristically Irish that the Dublin City Ballet, making its British debut at The Place on Thursday night, should present "An evening of works by Anna Sokolow", a Joycean of American Modern Dance and include in it another modern dance piece by a member of the company. It was, all to all, a rather unsettling occasion. Miss Sokolow's work is often dark in mood, and based on the intense suffering inspired by Nazi concentration camps. It calls for rather more powerful projection of its anguish than the Dublin dancers provide. If its expressive manner is to make proper effect, performed here with obvious good intentions, it looked grim, but uncommunicative.

It was preceded by a *Homage*

to John Field so slight as to be almost invisible, as two couples moped to the delicate traceries of music by the Irish Chopin. The evening was, indeed, markedly short on choreographic invention, though long on emotion. The Song from the North, by Anne Courtney, a leading dancer with the troupe, treated of violence, grief and what the programme opined was peace, in the context of a man shot in the back and mortally wounded by a woman. Its intensity of feeling spoke of national distress; its dance manner—yet more distraught falls and gesticulation—had immediacy, but limited dynamic range, though the performances by Miss Courtney and Tim Clarke argued its theme with commendable directness.

Miss Sokolow's *Nogritte*, differently in Dublin.

Saleroom/Antony Thorncroft

Cezanne and much more

With the London season in full swing, and the tourists cramming in for Wimbledon and Ascot, the salerooms are doing their best to tempt our purses. Among the riches on offer this week are a Cezanne portrait at Sotheby's, which carries an estimate which up to £15m, and a wood sculpture, intended as a bowl, which Christie's considers one of the finest items of tribal art to appear on the market in years. It expects bids up to £200,000 this morning.

Both the auction houses are holding their annual summer sales of impressionists, and Sotheby's has much the better show. The Cezanne portrait is of his future wife, Hortense Flouquet, painted just before they married in 1886.

Another Cezanne, this time a still life of apples, is in the same sale on Tuesday night. Still lifes by Cezanne rarely come up at auction and since this one has remained in the same family for 50 years, and thus has the essential "freshness", Sotheby's are confident of yet more bids around the £15m mark.

What makes Christie's African work of art unusual is that it is confident about the identity of the carver. The 26-inch high sculpture is attributed to Olowu, who is regarded as the best wood carver of the Yoruba tribe. He was born in what is now Nigeria

near the end of the 19th century and produced the bowl from a single piece of wood around 1920. It is decorated with many figures and has been much exhibited. It is sold from the estate of the American artist William Moore and part of the proceeds will go to a California monastery.

Two more particularly interesting items on offer at Christie's are a fine impression of what is thought to be the only print made by Pieter Bruegel the Elder, and a set of six George II side chairs that were originally in Ditchley Park.

The print depicts a landscape with rabbit hunters. It comes from a private collection up for sale and should make £25,000 on Wednesday. The chairs later ended up at Mercey Castle, where they were sold from there in 1968, through Christie's, for £2,200. Now a top estimate of £70,000 is placed on them at Thursday's sale.

On Tuesday Sotheby's is offering what it claims is probably the earliest known piece of English writing of any kind. It is, of course, in Latin and was written by an Irish monk. But his monastery could have been in Northumbria, and there is no denying that this recently unearthed fragment dates from the early 7th century. Sotheby's has now raised its estimate on this rare scrap of vellum to £80,000-£120,000.

Arts Guide

Music/Monday, Opera and Ballet/Tuesday, Theatre/Wednesday, Exhibitions/Thursday. A selective guide to all the Arts appears each Friday.

June 21-27

Music

LONDON

Ravi Shankar and friends. Royal Festival Hall (Mon, 22.30.1985).

Academy of London conducted by Richard Stamp with soloists including Tatiana Troyanos and Arlen Auger. Handel's *Gioio Cesare* in a concert performance. Barbican Hall (Mon, 8.30.1985).

Royal Philharmonic Orchestra conducted by Andre Previn with Yo Yo Ma, cello. Elgar. Royal Festival Hall (Tue).

London Symphony Orchestra conducted by Jane Glover with Sarah Walker, mezzo-soprano and Michael Aspel, presenter. Gala concert in the presence of the Duchess of Gloucester. Elton, Wagner, Mahler, Tchaikovsky and Poulenc. Barbican Hall (Tue).

Opera Performance: Royal Festival Hall (Wed).

PARIS

Novel Orchestra Philharmonique conducted by Marek Janowski. Leconte Byssac, soprano; R. Strauss (Mon, 22.30.1985). TMP-Citelet.

Ensemble Orchestral de Paris conducted by Jean-Pierre Walle. Metis-Rostropovich, cello; Galina Vishnevskaya, soprano; Haydn, Leontiadis (Tue), Saks Playel (Sat 06.30).

NETHERLANDS

Amsterdam, Concertgebouw. The VU Orchestra conducted by Deon Adriaens, with Peter Bruns, violin; Boris Shilov, Barok (Tue). Recital Hall: Imeldha concert by Joe van Ijck, flute, and Diny van Overveld, piano (Wed, 17.30.1985).

NEW YORK

Mostly Mozart (Concert Hall). Conductor, Gerard Schwarz; violinist, Joshua Bell; piano, Horacio Gutierrez. All-Mozart programme (Tue); conductor, Raymond Leppard; cellist, James Shuler; pianist, Ken Nedra; Soprano, Mozart, Haydn (Wed); Emerson String Quartet; Haydn, Mozart, Schubert (Thurs, 22.30.1985).

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Monday June 24 1985

Testing time for Lloyd's

THIS IS a critical week for the Lloyd's insurance market and for all those who plead the cause of self-regulation as the best method to regulate Britain's financial community. Lloyd's is due on Wednesday to make a policy statement on the most serious of its recent troubles: the PCW affair, one of the worst financial scandals to surface in the City of London.

So far Lloyd's has not acquitted itself well in the way that it has dealt with the case. There has been a lack of leadership over the problem, and what looks like an almost callous indifference to the plight of 1,525 underwriting members, who represent a significant part of the market's capital base, whose affairs at Lloyd's have been exposed to the most flagrant abuse.

In the first place about £40m of funds belonging to the underwriting members is alleged to have been misappropriated by two former executives of the PCW agency, which was acquired in 1973 by Minet Holdings, a publicly quoted insurance broker, whose main holding subsidiary is approved by Lloyd's.

Second, the underwriting members are facing mounting trading losses, as a result of what has all the appearance of reckless underwriting. More than £80m is required from the underwriting members' personal resources to fund the losses. Other troubles have surfaced which suggest that their losses may be due in part to past mismanagement of their affairs. For a few members the final blow is that stop-loss policies which were intended to limit their underwriting losses have turned out to be more or less worthless.

When Minet recovered large sums of the underwriting members' missing money last year, it made the members an offer in which it required them to assign away their legal rights to sue anyone in connection with the affair. Lloyd's itself gave no guidance on an arrangement which is now claimed by accountants on behalf of the afflicted underwriting members to be unsound in the light of the substantial losses which have since materialised.

Moreover, Lloyd's has appeared to ignore the fact that in sorting out the underwriting members' affairs, Minet has been trying to reconcile the very different interests of underwriting members and shareholders. Despite this apparent conflict of interest it

is only in the past few weeks that Lloyd's has chosen to put the management of the underwriting members' affairs into independent hands.

In the face of this mess, Lloyd's has stuck to the underlying principle that members are individually liable to the full extent of their personal wealth for trading losses—even though financial irregularities may have damaged the members' investment in the market. Although Lloyd's accepts a responsibility for managing the orderly market, it argues that all the irregularities took place before the regulation of Lloyd's was reformed by a new Act of Parliament which came into force at the beginning of 1983.

Inaction

Yet that is not a sufficient reason for inaction, for there can be little doubt that Parliament would not have granted Lloyd's its unique powers of self-regulation if it had known the full extent of the market's past shortcomings. Those powers must be used to limit the damage done to those who are threatened with such large losses through their involvement in the marketplace.

When Lloyd's reformed its self-regulatory structure it sought a powerful immunity from Parliament designed to protect it against suits for damages from its membership. This was designed to allow Lloyd's to take swift and effective action when trouble arose in the market without fear that its freedom of movement would be threatened by costly litigation.

Armed with this unique legal protection Lloyd's should take steps to limit its underwriting losses, to control the events at Minet's troubled agency. Since there are numerous precedents in existence at Lloyd's for providing financial assistance to members who have been hit by irregularities, it must provide real help for the members.

As a first step, it needs to do whatever is necessary to ensure that the stop-loss policies are honoured. Together with Minet, it has to find ways of helping members cope with that part of the losses which was not caused by orthodox underwriting.

If this affair is a test case for self-regulation, it is also an important measure of the Government's resolve in matters of trade law. It is also an important measure of the Government's resolve in matters of trade law. It is also an important measure of the Government's resolve in matters of trade law.

WHO IN their senses would choose to compete in an industry in which a new plant costs almost as much as a small steel mill, yet is likely to be obsolete in five years, and where product prices are about as unpredictable as cocoa bean futures?

To European electronics manufacturers contemplating the Alice-in-Wonderland economics of volume microchip manufacturing, the answer has long seemed self-evident. Most have been content to dabble timidly on the sidelines while U.S. and Japanese producers grabbed more than 90 per cent of the world semiconductor market, which grew to almost \$28bn last year.

But the harsh imperatives of survival on international markets riven by relentless technological change are forcing European companies to redo their sums. Many have now concluded that they have no option but to play for double or quits: that high as the risks are, their only hope of remaining competitive is to make much larger technical and financial commitments to chip-making than ever before.

The most eye-catching symbol of Europe's new-found ambitions is Megaproject, a three-year joint effort by West Germany's Siemens and Philips of the Netherlands to develop advanced semiconductor technology. They are gambling that, by leapfrogging into the next generation of microchip technology, they can close the two- or three-year lead which Japan has acquired in mass-production techniques. Megaproject's budget is \$500m, and each company expects to spend as much again on new production facilities.

Other companies are also running hard to catch up. Thomson of France and SGS-Ates of Italy are spending the equivalent of more than half their annual sales on research and development and capital equipment. Britain's Standard Telephones and Cables has launched a \$60m expansion programme. GEC and Plessey have also stepped up their investments, though mostly for more specialised components, many of which they use themselves.

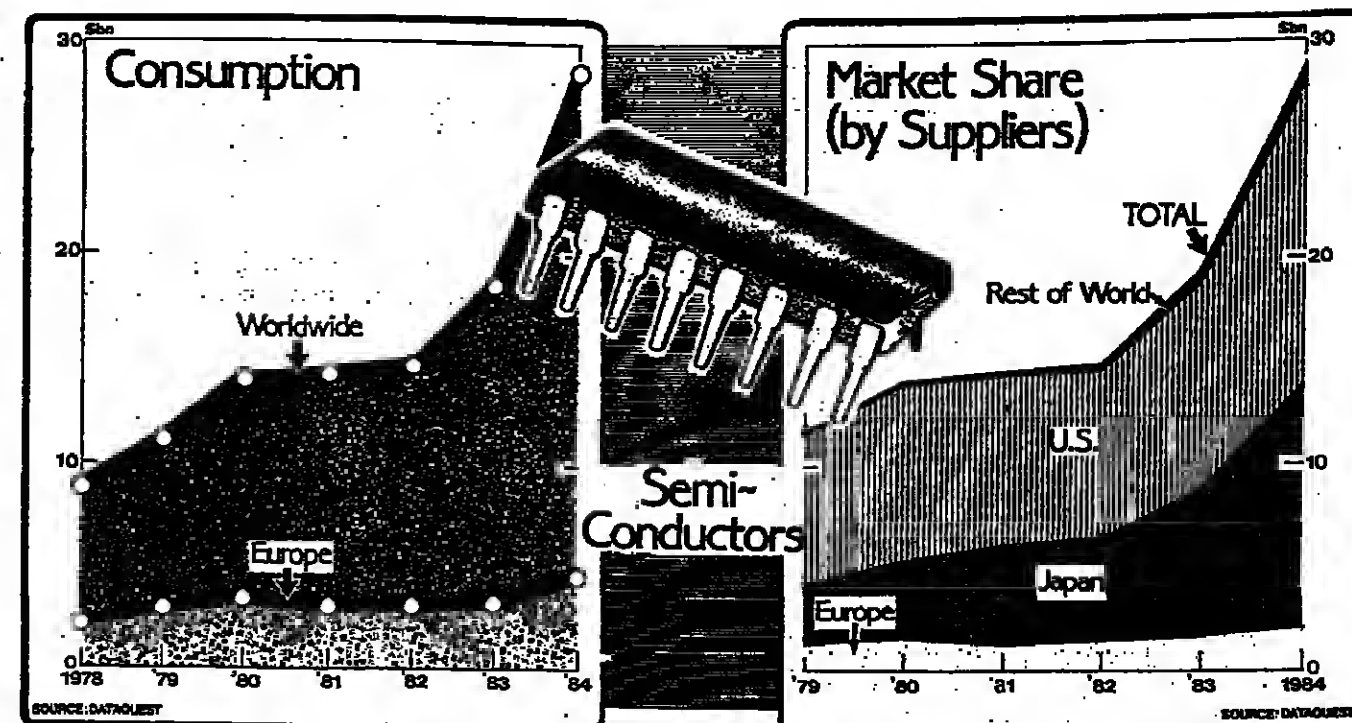
The results have begun to show though in higher sales. Last year the semiconductor businesses of SGS-Ates, Thomson and Matra-Harris of France and Britain's Immos all outstripped the record 50 per cent growth in the world market. Immos and SGS-Ates also moved into profit, though the outlook for this year is much less promising.

"I believe there is much evidence to support a European renaissance," says Mr Malcolm Penn of Dataquest, a U.S. company which specialises in analysing the semiconductor industry. A harsh critic of Europe's feeble performance in the past, he thinks it now has a "huge opportunity" to make an impact on world markets.

Some previously troubled European semiconductor businesses have been revitalised by the appointment of experienced and enterprising top managers. The recent recovery of Thomson Semiconductors and SGS-Ates owes much to the impact, respectively, of Jacques Lecoq, a former of Texas Instruments, and Mr Pasquale Pistorio, who was lured from Motorola, another U.S. industry leader.

Both men are notoriously hard taskmasters who have not flinched from applying real medicine. Last year, SGS-Ates ran a recruiting campaign featuring advertisements in which Mr Pistorio offered pro-

EUROPEAN SEMI-CONDUCTOR INDUSTRY



The harsh imperatives of survival

By Guy de Jonquieres

pective employees "blood sweat and tears. Several thousand eager applicants replied.

But European-owned manufacturers still face a long and gruelling struggle to reverse the steady decline in their share of the world market. Last year they accounted for a paltry 8.5 per cent by value, less than two-thirds the 1978 level, and only 3 per cent of markets outside Europe. Much of their output is still in older products and their share of microchips, the fastest-growing product sector, last year was a mere 0.7 per cent, according to Dataquest.

Only one European company, Philips, ranks among the world's top 10 suppliers (it is No 8). Moreover, it owes its place to its U.S. subsidiary Signetics, acquired in 1975, which contributed two-thirds of Philips' worldwide semiconductor sales last year.

European efforts to join the big league now face their first major test. Since last autumn, a slowdown in the U.S. computer industry and a massive worldwide surge in semiconductor production capacity has sent the chip market reeling, and few companies expect a recovery until well into next year.

Prices of some widely-used "commodity" chips such as 64K D-Rams have plummeted by as much as 80 per cent in the past year. "The market is terrible, atrocious. It is the worst crisis I can remember in 22 years in the business," says Mr Pistorio of SGS-Ates.

Profits in much of the industry have evaporated. In the U.S., many planned investments have been shelved and there have been renewed calls for trade protection against Japanese manufacturers. The latter, which have been pursuing a policy of expanding in recession, are pushing ahead relentlessly with plans to double output of the new generation of 256K D-Rams,

further depressing prices. South Korea is also making a big push into the memory chip market.

The Europeans can draw some comfort from the fact that their home markets are slightly less volatile than the U.S. Many are cushioned by subsidies. Thomson and SGS-Ates are both state-owned and get sizeable public investment assistance, while the Dutch and German governments are contributing about \$100m to the cost of Megaproject.

Britain is the only large EEC country not providing direct

severe bleeding," said Mr Penn. So why bother? The answer lies in Europe's belated recognition of the breathtaking speed and scale of the revolution which silicon technology is producing in the electronics industry. Advances in miniaturisation since IBM's personal computer was launched in 1981 mean that it could be redesigned using only 250 chips instead of 250,000. By 1988, it is estimated that the number could be reduced to three.

The competitive advantage of many products, from machine tools to microcomputers, is increasingly determined by the power and functional characteristics of the chips they contain. As product life cycles continue to shorten, easy access to the most advanced microelectronic technology is becoming a key factor in commercial success. Some European companies believe they can only secure the technology through a bolder commitment to memory chips, where the need for high volume and low costs forces manufacturers to push their production techniques to the limit. That is also the most volatile and fiercely competitive part of the chip business. "But you have to be able to make such products if you want to make more sophisticated components," says Dr Hermann Franz, head of Siemens' components division.

Compared with their U.S. and Japanese competitors, however, European manufacturers face at least two handicaps: high production costs and sluggish home markets. "Everything in Europe is so much slower and more difficult, I am forced to make more overseas," says Mr Pistorio. SGS-Ates has just completed a \$50m Singapore plant, and plans to run 24 hours a day, seven days a week. Semiconductor sales in Europe last year totalled \$4.8bn, well under half the U.S. level and only 18 per cent of the world market—down from 30 per cent in the early 1970s. That amounted to a mere \$14 per head of population, against \$55 for the U.S. and \$87 for Japan.

The lag is due partly to Europe's shortage of large-volume chip applications. Computer manufacturing accounts for barely a fifth of its total chip consumption, against almost half in the U.S. and consumer electronics in difficulties. Europe's telecommunications industry is technically strong but sells mostly to slow-moving national monopolies which rarely subject their suppliers to the "bracing" commercial disciplines imposed by private sector customers.

Dr Iann Barron, chief executive of Immos which specialises in very-high-speed memories, says many UK customers complain that its products are too advanced for their needs. "Immos is an irrelevance to the European industry at this stage," he says. "Europe simply doesn't provide the 'market pull' needed to create world product standards," adds Dr Theo Holtwick, manager of Philips' semiconductor planning.

Some believe that the growing market for "custom" and "semi-custom" chips, made in relatively low volumes and tailored to specific applications, offers a big opportunity for Europe. Computerised techniques are revolutionising this business, cutting design times from months to weeks and sharply lowering costs.

Until recently, Ferranti was the world leader in semi-custom components. But others are catching up fast, and its sales last year were overtaken by Japan's Fujitsu and LSI Logic, a U.S. company formed in 1980. Some critics accuse Ferranti of

not pressing its advantage hard enough: the company says it must put margins ahead of market share.

Europe's stodgy markets are causing many manufacturers to seek most of their growth overseas, principally in the U.S. Immos, which has a plant in Colorado, sold 80 per cent of its output in the U.S. last year. SGS-Ates is building a \$100m factory in Phoenix, Arizona, and Siemens and Thomson are talking of spending at least as much to establish U.S. production bases.

What are Europe's chances of success? In strictly scientific and technical terms, it is almost certainly up to the task. Its universities and industries do not lack skilled manpower, and some of the laboratory research being undertaken by companies such as Philips and Siemens is judged to be equal to the best in the U.S. and Japan.

But the real challenges are more likely to be in organisation, management and marketing. Sheltered by conservative home markets, most European electronics companies have not had to develop the hair-trigger responsiveness demanded by the semiconductor business. Few apart from Philips have much experience of running complex, geographically dispersed manufacturing and marketing operations.

Philips and Siemens are both probably big enough to justify large investments in semiconductor production on the basis of their own needs and to finance them out of their own resources. Other companies are not so fortunate. Mr Noels of Thomson argues that government support will always be necessary in Europe because private investors are reluctant to provide financing.

"This business requires \$10m of investment every four to five years. You can't do that alone," he says. "But nobody in Europe is prepared to believe that you can make profits out of semiconductor."

The outlook is further complicated by signs that the world semiconductor industry is in the throes of a confusing structural upheaval. The difficulty of financing huge fixed investments when profits vary wildly from year to year has driven many older U.S. semiconductor manufacturers into the arms of larger industrial companies. But such marriages have proven no guarantee against losses and can create their own management problems.

Japanese competition has already squeezed many U.S. suppliers out of commodity components such as D-Rams. Whether American companies can hope to stage a comeback or should focus on other products such as specialised "custom" chips, is a subject of heated debate as California's Silicon Valley tries to identify future market trends from a jumble of conflicting signals.

Small wonder that in spite of its new-found momentum, much of Europe's industry is cautious about setting grand goals. "It is not a minor factor that Europe exists at all in semiconductor," says Mr Noels. "It is by the late 1980s, two of the top 10 companies are European, we can say we have succeeded. That is a much more valid criterion than the semiconductor industry's balance of trade, how many jobs it creates or how many chips Europe exports."

This is the fourth article in the series. Previous articles appeared on June 17, 19 and 21. The next will be published on Wednesday.



state support to an indigenous volume microchip manufacturer. Immos, which was set up by the Government in 1978, was sold last year to Thomson EMI, which is currently feeling the impact of falling profits in consumer electronics, its main business.

European companies seem likely to have to face a lot more trials even after the market recovers from its current troubles. "They must all be prepared for five years of

his frequent calls for an easier monetary stance, Volcker has never before publicly criticised him. Fed watchers have, therefore, been left pondering Volcker's motives in doing so now.

Speculation centres on two possibilities. Martin, a Reagan appointee, is often mentioned as possible successor to Volcker should the Fed chairman step down during this Administration. Some Wall Street observers suggested that Volcker may have launched the attack as a prelude to a succession battle on behalf of some other contender.

Others believe the outburst was prompted merely by concern over the timing of Martin's remarks and their impact on current negotiations with Third World debtor nations.

Bankers noted that Martin's comments—which included the suggestion that debtor nations' interest payments should be capped—might be viewed by countries like Argentina, which has just introduced a sweeping austerity programme, as a change in the current U.S. "case-by-case" strategy for dealing with the debt problem.

Whatever Volcker's motives, it seems likely that he and other Fed officials will want to paper over any differences of opinion within the ranks as quickly as possible. Volcker, himself, will have an opportunity to do so on Thursday when he makes one of his regular appearances on Capitol Hill before a Congressional committee.

Bid for glory

Whet price bravery? There will be one answer at Sotheby's on Thursday when an auction of medals and decorations will include the World War I Victoria Cross awarded to East Anglian drummer S. J. Bent for his defence of a trench against repeated enemy attacks in 1914 after all his superiors had been killed or wounded. Together with his other medals, it is expected to fetch between £8,000-£10,000.

Observer

Danger signs in farm trade

ONCE AGAIN, the war drums are beating in Washington and Brussels over agricultural trade. Disputes over export subsidies and tariff protection have—in terms of rhetoric at least—brought relations between the U.S. and the EEC on farm issues to their lowest point for some time.

Claiming that the Community has used unfair subsidies to rob it of agricultural markets in the last few years, the U.S. has set up a \$2bn programme of its own—targeted against the EEC—to try to win back customers in the next three years. A transatlantic row about trade in citrus products threatens to trigger off damaging chain reaction of retaliatory measures.

Tension between the two sides over agricultural trade is nothing new. The U.S. has long complained about the aggressive loss of the EEC market as the Europeans have become more self-sufficient in food. But it has come grudgingly to accept the position, and the conflict has by and large been restricted to localised, and carefully stage-managed, skirmishing in third markets.

Sabre-rattling

There is no denying, though, that the temperature has risen this year. The main reason is pressure for action from Congress, reflecting the dire financial straits of many U.S. farmers and frustration at the EEC's failure to agree on a date for a new round of multilateral trade talks.

In a sense, the latest American sabre-rattling is founded on an irrelevance. The U.S. has indeed lost markets in just a few years, but not just to Europe, Canada, Argentina and Australia have also made sales at its expense.

Besides, two of the main reasons for the drop in U.S. agricultural exports can be laid squarely at the door of policymakers in Washington. These are the strength of the dollar, and the unforgiving American embargo on grain sales to Moscow in the wake of the Soviet invasion of Afghanistan.

Most important of all, a limited battle over specific markets between two large exporters will do nothing to tackle the real disease underlying most farm trade problems, which is a massive surplus of subsidised production capacity.

What ever the U.S. grievances against the EEC—and it has many justified complaints—redress does not lie in a spate of ill-considered export aggression.

For one thing, there is a real danger that an agricultural trade war could spill over into other areas.

For another, the idea that market forces should be allowed to play a greater role in agricultural trade is, in any case, gradually gaining ground in many national capitals.

In Washington, the central tenet of the Reagan Administration's 1985 farm bill—that price support levels should be lowered to allow farmers to compete more effectively—has taken a surprising hold among Congressmen. In Brussels, the European Commission—backed by Britain and France—is well aware of the need to reduce EEC cereal prices towards world levels.

The important thing for the U.S. and the EEC ought to be to capitalise on these developments by moving in an orderly fashion towards talks aimed at reducing agricultural protectionism in the next round of Gatt negotiations.

For Brussels that means agreeing as a matter of urgency to a date and a relevant agenda for the talks, and sticking to policies aimed at bringing EEC prices in line with world levels. For Washington, it means doing the utmost to contain political pressure for more aggressive action. The panyon of EEC farm subsidies is as old as the Community itself, although its effects have arguably become more damaging to other exporters in recent years. They will not be changed overnight.

With the mountains of surplus and the unforgiving American embargo on grain sales to Moscow in the wake of the Soviet invasion of Afghanistan,

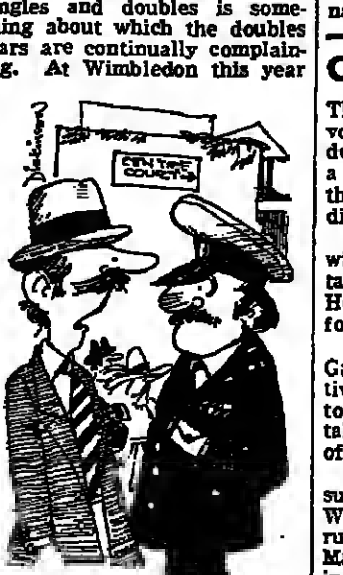
Doubles—the money

He is an unlikely looking athlete—a balding, 30-year-old with a drooping moustache and a thick neck.

Australia's Mark Edmondson accepts the banter provoked by his appearance. He can afford to. As one of the tennis world's male millionaires (on prize money alone), he can take his cheerful wife, Vicki, and their small son, Mark Karl (originally they were going to call him Karl Mark but for obvious reasons reversed the names), with him on his travels around the world.

The Australian Open champion of '84, Edmo has always excelled in doubles. His latest success, with Kim Warwick, at the French Open earlier this month earned him another \$29,250—seemingly respectable sum until you discover that Sweden's Mats Wilander earned \$146,000 for winning the singles in Paris.

The disparity in rewards for singles and doubles is something about which the doubles stars are continually complaining. At Wimbledon this year



"The problem here is stopping the bad behaviour spreading to the spectators"

Men and Matters

the total prize pool is \$1.94m, of which the men's singles champion will take \$130,000 and the women's champion \$117,000. The respective doubles prizes are \$23,750 and \$20,550 per player.

Without John McEnroe and Martina Navratilova will carry off the lions' share of this year's rewards to increase the earnings that have already catapulted them into the super league of showbiz stars.

McEnroe's total prize money so far is \$8.1m; while Martina's \$9.4m makes her the world's richest sportswoman.

Not that "Eddie" is envious. When he celebrates his 31st birthday on Friday, his prize money from a decade of globe-trotting will be nearing \$1.35m—not bad at all for a former maintenance man from Goshford, New South Wales, whose father was such a tireless worker for tennis in the community that a local tennis complex has been named after the family.

Oil field

The British Red Cross—a volunteer force of 100,000 funded by public donations of £15m a year—has again turned to the oil industry to recruit a new director-general.

After nearly 30 years service with Shell, John Burke-Gaffney takes up the post in September. He succeeds Donald Pigott, a former BP executive.

Born in Africa, Burke-Gaffney was Shell's chief executive in Zambia before returning to Britain a few years back to take charge of the production of Shell's "global issues" films. He has been concerned with such films as "For Want of Water," showing how poor, rural communities in Zimbabwe, Malawi and Nepal, cope with an inadequate water supply; and "Escape from Hunger," a study of the fight against famine in the Third World.

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FOREIGN AFFAIRS: THE MILAN SUMMIT

It's not business, it's politics

By Ian Davidson



Walter Hallstein

THE NOVELTY of the European Community summit which takes place in Milan at the end of this week is that it is the first for many years which is not bedevilled by old quarrels. On the contrary, the heads of government will be free to debate the problems of the future, how to turn the Community into more of a common market; how to improve its decision-making processes, primarily by more majority voting; how to tackle the technology gap between Europe and Japan and the U.S.

The consequence of this relatively up-beat, forward-looking agenda is that it leaves the heads of government very exposed, in terms of success or failure. In the past they could always blame the Community's stagnation on the British budget quarrel, or the Spanish entry negotiations. These excuses are no longer available. If they fail to come up with some agreements which offer plausible promise that the Community will be more dynamic, more successful and more beneficial to the member countries, we shall all know what to make of their rhetoric. We shall know that they do not mean a word of it.

The British government is facing the challenge with energy and even enthusiasm. It has prepared umpteen proposals, papers and even "non-papers". In Brussels its emissaries stride the corridors with firm step and cheerful countenance. One of them has even been known to exhort a continental opposite number to cheer up.

They are confident because they hope they have largely diverted the other member states from flirting with quasi-federalist rhetoric: no new treaties, please, no abandonment of the right of national veto, and above all no new legislative powers for the European Parliament. At the same time, they believe the hand-wagon is rolling towards a freer internal market for goods and services, and that the British interests, in short, are being served.

But there is a paradox in all this. Mrs Thatcher's government has employed every device of diplomatic reason and "realism" to puncture dreams

of a federalist leap forward. Perhaps in terms of "realism" it is right to do so. But if it should succeed in persuading the other member states to march rapidly down the road towards a free internal market, then it is entirely likely that the process would require unconvincing surrenders of national sovereignty which are so politically distasteful to Mrs Thatcher.

Take majority voting. It is obvious, and widely acknowledged, that negotiations on market liberalisation will get nowhere unless it becomes standard procedure, even on issues where the Rome Treaty requires unanimity. This the British government freely admits, with the obvious risk that it could be in the minority as often as in the majority. Or more often: a study of recent decisions suggests that the British voting might not have favoured British interests, narrowly conceived. If liberation of financial services is in the interests of others, it is in the interests of the British.

But there is more. As one of the minority of countries that explicitly wants to retain the right of national veto, Britain will be in a weaker negotiating position than countries which do not want to abolish it. For it will not be able to prevent other governments calling for a vote when it suits them; but it will be obliged to vote against any government which invokes the right of veto. Net result: a greater surrender of sovereignty on issues which suit other countries than on those which suit Britain. This is not unfair, just the poetic backlash of Britain's endorsement of the right of national veto.

But let us suppose, against all the odds, that the British formula is accepted and succeeds in quashing the circle of the formal right of national veto is retained, but never brought out of the cupboard: majority voting rules OK? The first consequence is that the Commission's authority becomes more powerful, especially if it is led by an impressive figure like Jacques Delors.

Under a rule of unanimity, either nothing is decided, or else the decision is given by the member states. Under a

majority regime, dissident governments have less leverage against the commission — especially if they support the right of national veto. I do not suggest that this would be a bad thing; quite the contrary. For too long we have witnessed the wonderful achievements of unanimity and weak Commissions, which have enabled the continentals to withhold the liberalisation of financial services which would benefit Britain and which is prescribed by the Rome Treaty. But it may be important to understand the consequences of an irrational political posture. Moreover, the Commission will probably become more influential, not merely in relation to the Council of Ministers, but also in the exercise of a full liberated market. The removal of national restrictions on trade will throw up hosts of firestorm administrative problems, which the foreign ministers could not possibly hope to deal with. It is a fair bet that it will be necessary to set up oversight committees in Brussels, like the management committees in the farm policy, in which the Commission would have a dominant position.

But let it pass. Majority voting rules, and all national restrictions on trade are swept away: is trade within the Community free and unimpeded? No, because differences in indirect taxation and excise duties, whose effects were partially concealed behind other, administrative restric-

tions, have now become more salient.

Lord Cockfield, Britain's renegade Euro-converter in the Commission, has spelled out the implications with brutal clarity. In his White Paper on the liberalisation of the internal market, he says: "The only conclusion that can be drawn is that no means exists of removing the frontier controls, and thus the frontiers, if there are significant tax and corresponding price differences between the member states."

In gross terms, Britain's dependence on the revenue from VAT and excise duties is not far from the Community average. Denmark and Ireland are much more heavily dependent, so harmonisation is likely to be more difficult for them. But if excise duties are taken separately, Britain joins Denmark and Ireland in the camp of the high taxers: VAT harmonisation would also raise problems for the zero-rating of a wide range of politically sensitive goods and services.

It is not that the Mother of Parliaments would necessarily have to submit British fiscal policy to majority decision in Brussels, nor even that there need be absolute uniformity in indirect taxes: American experience suggests that a discrepancy of up to five per cent may be small enough to avoid serious trade distortions. But if trade restrictions are to be removed, there has to be a degree of harmonisation, whether it is through negotia-

INDIRECT TAXES IN THE EEC

(as a percentage of GDP 1982)

Per cent	VAT	Excises total	VAT and Excises
Belgium	7.67	2.39	10.06
Denmark	9.84	5.87	15.71
Germany	6.34	2.70	9.04
France	9.19	2.22	11.41
Ireland	8.22	8.91	17.13
Italy	5.48	2.84	8.32
Luxembourg	6.04	4.24	10.28
Netherlands	6.83	2.36	9.19
UK	5.22	4.58	9.79
Weighted EC Average*	7.05	3.63	10.68

*Excluding Greece, where the necessary statistics were not available

tion, unilateral action, or a fudge between the two.

The British government is dead set against all ideas for joint decision-making between the Council of Ministers and the European Parliament, ostensibly because this would in effect prevent any decisions. Yet something may have to be done for the parliament, partly because majority voting would raise a serious question over the democratic legitimacy of Brussels decisions; but mainly because a parliament which remains frustrated by its minimal influence on decision-taking is likely to be obstructive.

If the parliament does not get a bigger role as part of the last word in the decision-taking process, it will have to get it as part of the first word: in other words, it will have to be more intimately involved with the Commission in formulating legislative proposals before they are presented to the Council of Ministers. Parliament has always been the natural ally of the Commission against the member states; an evolution of this kind could only reinforce that alliance.

Finally, the removal of restrictions on internal trade is bound to highlight the drawbacks of the British government's preference for not being part of the exchange rate mechanism of the European Monetary System. To be sure, there are problems and uncertainties, and they were rehearsed yet again

with predictable smoothness last week by Mr Anthony Lofthouse of the Bank of England. But the argument based on "uncertainties" is an argument for not being born; it does not dispose of the business requirement to have a more predictable exchange rate relationship with markets in Europe. If serious decisions are taken to move within five or seven years to an entirely free market, that business requirement cannot be simply pigeonholed under the rubric: When The Time Is Right.

Of course, it is entirely conceivable that firm decisions will not be taken. No one seriously contests the intellectual case for making the Community a truly Common Market; a more dynamic trading environment may offer the only prospect for faster economic growth and a more vigorous European industry. But whereas free trade is part of Britain's traditional ideology, at least in theory, it is not one of the traditional ideas recuses in France. It requires a leap of faith to suppose that intellectual argument will persuade the member states to abandon attitudes to which they have consistently clung for 15 years.

But if they were to break with long-standing precedent, it is as well to recognise the consequences: there can be no economic advantages without political implications. As Walter Hallstein, first President of the Commission, used to say: "We are not in business, we are in politics."

Lombard

Fed aim still is lower dollar

By Samuel Brittan

WHILE the various economic think tanks and roving economic advisers have been advising European governments to increase their budget deficits to offset the expected fiscal retrenchment in the U.S., the reality has been very different. This is that while the prospects of a major cut in the U.S. budget deficit are as cloudy as ever, the Fed has moved towards a fairly aggressive easing of policy. The most dramatic evidence of this is not in the movement of the rather sluggish prime rates, but that 2 per cent more market-sensitive interest rates.

Although these rose somewhat on Thursday in response to the widely unreliable first estimate of second quarter GNP, they are still in the 6 to 8 per cent range and scarcely more than half the 1984 peak.

This has happened in advance of any clear progress in budget deficit reduction, and in the face of the large overshoot of the main measure of the U.S. money supply above its target range.

The Fed is clearly worried about U.S. growth. Even including the second quarter estimate, the U.S. growth rate over the past 12 months has averaged little more than 2 per cent a year — probably less than in the UK — and most revisions to GDP estimates have been downwards.

The main reason for the diminution of U.S. growth is not a fall-off in the growth of domestic demand (whether measured in real or money terms) but the siphoning-off of a growing proportion of this demand towards imports and away from U.S. products.

Even sales of U.S. domestic purchases have risen in the past 12 months by nearly 4 per cent a year — which is still almost a boom rate. The discrepancy between these figures and real GDP is accounted for by the surge in imports and relative weakness of exports.

Nor can there be any doubt that the dollar is still very high. Despite falling off from its January peak, the dollar remains higher against the mark, the yen and the currency basket than at almost any time in 1984 and about 15 per cent higher than the 1984 average.

There may be a temporary lull in the relaxation of Fed policy while stock is taken of the economic outlook. But the trend is still strongly towards greater ease.

The aim of the Fed is clearly to encourage a gentle slide of the dollar towards a level consistent with a better trade performance, and to reach it if possible in a soft landing rather than a big bang.

The U.S. central bank is able to get away with a policy of encouraging gradual depreciation, because the upsurge in inflation, forecast by most mainstream economists, including some in the Fed, has failed to materialise. Consumer price inflation remains below 4 per cent per annum.

The most orthodox reason for a good inflation prognosis is that the 1984 rise in the dollar was not fully reflected in import prices, as importers preferred to take the main benefit in higher profit margins. In that case the dollar can fall some way before foreign producers competing in U.S. markets start raising prices and make it easier for their U.S. competitors to do the same.

The least orthodox explanation comes from those U.S. "supply siders" who believe, on the basis of falling dollar commodity prices, that the real problem is deflation rather than inflation. Their view would find an echo in Cambridge, England, if with a different ideological resonance.

A third and ultimately more encouraging view voiced for instance by Professor John Kendrick in the AEI Economist, places most emphasis on the improvement in U.S. productivity and also the development of a more competitive labour market with a lower underlying (or NAIRU) rate of unemployment.

If other central banks want to encourage the continued expansion of U.S. domestic demand and help bring about a soft landing for the dollar, monetary rather than fiscal co-ordination will be the centre of the stage. Germany and Japan are probably running excessively tight budgetary policies; but the obsession of rampant economists with the fiscal side should not obscure the monetary dimension.

Business schools' financing

From the Director, Business Graduates Association

Sir — The suggestion that business schools should be privatised (June 13) has been raised before and upon close examination has been in some respects found wanting.

Most business schools produce very healthy revenues from executive programmes, teaching on in-company courses and from consultancy and on that basis alone they could pay their way handsomely. The difficulty arises with the core elements of any university business school, its MBA course, its doctoral programme and its research. To be economic, MBA and PhD fees would need to be trebled from the set figure agreed nationally with Government across all subjects. To single out business degree courses for such treatment in an educational culture used to subsidise for institutions and grants for students could easily be self-defeating for the national goal of producing more managers, at least in the short term.

Research falls into two categories. Applied research that is often already paid for by industry, and basic research which is not directly applicable at the time. This basic research is necessary for the development of business subjects and would need to be supported by philanthropic organisations, as is the U.S. if business schools were privatised.

There is, of course, a gleeful irony in asking business teaching institutions to reverse Bernard Shaw's dictum. I have no doubt that if business schools were privatised they would survive and prosper. Whether this would force cutbacks in research and a scramble for any student who could pay, resulting in variable standards and absentee teachers we cannot be sure. The present high quality and acceptability of UK business graduates reflected by the fact that in our recent survey only three out of 700 respondents indicated any difficulty in obtaining jobs. (Professor) J. A. Kennerley, 28, Margaret Street, W1.

Development at Ely Cathedral

From Messrs J. Bowman and C. Bez

Sir — We are appalled at the plan by the Dean and Chapter of Ely to violate with building development some mature gardens and virgin pasture adjoining a precinct of the cathedral. The threatened land is surrounded by development at the heart of the city and it provides an essential foil in a majestic view of the apse and end of the cathedral which with a multitude of piers and flying buttresses each crowned with a projecting gar-

Letters to the Editor

goyle under an ornate stone pinnacle. Recently it was retrieved to the world upon demolition of some derelict buter nearby and until construction of a typically graceless supermarket subsequently, it could be enjoyed from the banks of the River Cam more than a mile distant.

The scheme to augment the urban content of the ancient city arises principally to create money (to pay for repairs to the roofs of some neglected buildings in the custodianship of latter day aspirant private developers) rather than from any sound principle of good planning, is monstrous and is indefensible. James Bowman, Colln Bex, c/o 3 Churchfield Road, W3.

Small investors' costs

From Mr H. Bear

Sir — I was amused to read your report (June 12) of Mr Lawson's lecture, urging, inter alia, the City to cut small investors' costs, which many of the stockbrokers' institutional income will disappear.

As Mr D. Franklin (June 8) so rightly pointed out in regard to the taxing of income below subsistence level, our Chancellor, as many before him, is good at identifying problems but often fails to come up with the correct answers. Costs are a problem.

For 40 years I have dealt with sundry stockbrokers who are at their desks before 9 am, never seem to stop for food, and are still working at 5 pm. Most have also taken calls at home, even on Sunday evenings. I do not begrudge them their commission, which has to cover all of their office expenses, or the Treasury its 15 per cent VAT. I do begrudge the iniquitous 1 per cent stamp duty which I have to pay to the Treasury for doing absolutely nothing productive.

Last year the Chancellor, in his wisdom, reduced this duty to 2 per cent; why not abolish it and cut the cost of investing, up to 57,000 in ordinary shares, by over 84 per cent? That might even encourage the stockbroker to keep their charges down to present levels when scales are abolished.

If shares are to be sold "in the High Street" would the Chancellor, perhaps, prefer to include the Stock Exchange in the forthcoming Shops Bill, to increase competition and give the public the freedom to buy shares seven days a week? With so many tipsters writing in the weekend papers, Sunday could well become the Stock Exchange's most busy day. To com-

plete the picture, and cater for the 10 per cent who reportedly still go to church, it would only remain to licence the vicars to deal in securities as traditionally, they are always among those left holding the "buy" recommendations when the bottom falls out of the market, they would no doubt welcome the opportunity of off-loading their shares on their flock; they could certainly do with the extra cash.

I am gravely disappointed with the Chancellor for not being able to work this out for himself, now that the Conservatives are liberalising everything! I am even more disappointed in the sure knowledge that he will continue to ignore my advice. H. F. Bear, 71, Tossington Crescent, Fetti Wood, Orpington, Kent.

In praise of new issues

From Mr D. Hunter.

Sir — The implied praise of the U.S. new issue system by Lex (June 21) is surprising. The Abbey Life piece suggests that there are no "hot deals" in the U.S. Although they have been few and far between recently, the U.S. investment banking and investing community would happily return to the spring of 1983 when a majority of deals opened at a significant premium.

UK investors, however, would not welcome a system which allows the "but deal" to be placed with the friends of the issuing house and the cold one to be placed by virtue of using high placing commissions, 5 per cent not being an unusual fee for persuading the unfortunate investors to part with their money. The placing system used in the U.S. was effectively banned in the UK after much adverse Press comment, some of which was justified.

The City may have a lot to learn from Wall Street but I do not think that new issue methodology is in this category. Our system provides a visible equality of opportunity which does not even pretend to exist in the U.S. "hot" "pre-market" premiums can be avoided if so desired by using the "tender" method. David Hunter, I. Messel and Co., PO Box 521, 1, Finsbury Avenue EC2.

Applying for shares

From Mr D. Dickins

Sir — As a genuine small investor, I am heartily sick of

the way "new issues" are conducted. I repeatedly put in for the number of shares I want, only to find the issue oversubscribed by big institutions and stages, resulting in a ballot in which I never (well, hardly ever) win. Surely it would be quite easy to provide an option for those who want shares for investment, to qualify their application with an undertaking not to sell for, say, six months or a year, and to give them preference? The company would of course mark its registers accordingly. Douglas Dickins, 2, Wessex Gardens, NW11.

Imported gas cookers

From the Director, National Gas Consumers' Council.

Sir — Your report (June 18) on potentially dangerous cookers being imported from southern and eastern Europe highlighted a problem of considerable concern to this Council.

Consumers ought to have the assurance that the gas appliances they buy are safe, and in our view all cookers offered for sale should conform to basic safety standards, preferably those established by the British Standards Institution. There is an urgent need for this safety requirement to be mandatory and we have urged the Government to use powers available to it under existing legislation to make it so. It is quite unacceptable that dangerous cookers should gain competitive advantage over British counterparts by lowering safety standards. John Hosker, 102, Regent Street, W1.

Private medical insurance

From Mr C. Green

Sir — I was dismayed, but not entirely surprised to read (June 18) that the Association of Scientific, Technical and Managerial Staffs conference had decided to instruct its officials to bargain away private medical insurance schemes and to ban officials from negotiating deals incorporating such schemes.

Clearly what we have here is yet another example of how out of touch some unions are with the needs of their members. It is fair to assume that a large proportion of ASTMS white-collar members not only appreciate this type of benefit, but would most certainly expect their local representatives to negotiate such schemes.

With such obviously politically motivated policies being proposed, it is not wonder that ASTMS experiences difficulty in obtaining new members from the professional and managerial groups of workers? Christopher J. Green, 77 Oakdale Road, Downend, Bristol.

U.S. Tax Reform—our view will keep you in the picture.

In response to the growing number of questions raised by the recently announced U.S. Tax Reform Proposals, Coopers & Lybrand have prepared a detailed 24 page analytical assessment. Specifically designed to explain the fundamental and wide ranging implications of those proposals on both personal and company tax planning, this essential guide is now available on a complimentary basis.

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Terry Byland on Wall Street Marking up the little banks

THE TURMOIL in the U.S. credit markets, highlighted last week by reductions in bank prime rates from 10 per cent to 9 per cent, has put the banking stocks in the centre of the stage, but may have distracted attention from longer term, potentially more significant trends in the sector.

The cut in prime rates was a necessary reaction to the falling rates in the money market, which have cut the banks' own cost of funds and doubtless benefited earnings significantly for the second consecutive quarter.

In fact, Wall Street was inclined to dismiss the half point reduction as only a first instalment, with a further half point cut almost a foregone conclusion, but the rebound of 40 basis points in Treasury bills at the end of the week has dimmed the chances of another cut in prime rate just now.

The more reason, then, for investors to turn their attention back to regional bank stocks, which have so far responded slowly to the Supreme Court's important ruling on interstate banking.

The June 10 ruling effectively upheld the legality of regional interstate banking compacts. It was, at first glance, a setback for large money centre banks, which have been intentionally excluded from many state laws permitting interstate banking links. But a bill recently approved by the House banking committee would remove all interstate banking barriers after five years among states with reciprocal banking legislation.

Wall Street analysts were quick to respond to the implications for banks throughout the south-eastern states, which are now likely to form

powerful units, capable of developing independently of the money centre giants. A substantial move towards amalgamation is widely predicted, involving scores of mergers.

Regional bank stocks currently sell on around one and a quarter to one and a half times book value. There has already been activity in the market, aimed at bringing the laggards into line.

The market to book valuation of Florida national banks has moved up by 10 points since the Supreme Court ruling, according to statistics produced by Mr. Thomas Hanley, the banking stock expert at Salomon Brothers. Its fellow Florida bank, Pan American Bank, has also moved further above its book value.

The strongest candidates for takeover activity, from the market's standpoint, seem to be in Georgia and Maryland. The stock price of First Railroad Banking, a Georgia bank, with assets of \$30n, has gained nearly 10 per cent since June 10, and now trades at 175 per cent of book.

The market seems to be upgrading its valuation of regional bank takeover targets to around 150 per cent of book value. Several stocks already trading in this range have made little move since the Supreme Court ruling. For instance, First Virginia Bank, standing at 178 per cent of book on June 10, has not stirred since.

But if this is to be the new rule of thumb for valuing the potential takeover targets, then several stocks are still out of line. First Fidelity Bancorp of New Jersey, with \$10.7n in assets, is a noticeably soft spot, trading at only 117 per cent of book, on a stock price barely changed since the court decision.

By the close of trading on Friday, short-term interest rates had returned to the levels ruling before last week's excitement. If prime, discount and other interest rates are going to take a back seat for a while, then investors will have the opportunity to take a closer look at the regional bank stocks.

U.S. bonds, Page 20

Strong growth forecast for British economy

BY MAX WILKINSON, ECONOMICS CORRESPONDENT

THE BRITISH economy is set for a strong performance this year, with inflation moderating after the summer months according to two influential forecasts out today.

The Confederation of British Industry (CBI) says its latest survey of manufacturing companies indicates that order books are still close to their strongest levels for eight years.

And yesterday, Mr. David Wigglesworth, chairman of the CBI's economic situation committee, said the results indicated the whole economy would grow by 4 per cent this year, with a slower rate of price increases in the next four months.

This growth rate is significantly better than the Treasury was predicting in March and well ahead of the 3 per cent consensus of City of London forecasts.

It follows publication on Friday of the latest official estimate for gross domestic product in the first three months of the year. This suggested the economy was growing at an underlying annual rate of 3 per cent, about 1/2 percentage point better than the preliminary estimate.

The London Business School's Centre for Economic Forecasting gives cautious support for this optimistic outlook. Its latest predic-

tions, also out today, suggest the economy will grow by about 3 per cent this year, with steady growth of about 2 per cent a year for the next three years.

It expects the turning point for unemployment to be reached in the next three months, when it predicts that 3.67m adults will be out of work. However, although the number of jobs available will increase steadily, it believes total unemployment will be reduced only to 2.62m by 1988.

The business school also believes that growth in the economy over the next few years will be too small to give the Government the scope to make the £3bn a year tax cuts it planned for the next three years in the run up to the next election.

The forecasters think public sector wage increases will push the Government's spending totals well above planned levels.

They also believe that the Government's oil revenues this year and next will be about £2bn less than predicted in the Budget, mainly because of the rise of sterling against the dollar. Oil prices are expected to be roughly unchanged in dollar terms.

Even without tax cuts it expects the Government would overshoot

the borrowing figures set out in its medium term strategy, unless its privatisation programme were accelerated from the £2bn to £2½bn a year planned in its last White Paper.

In spite of these potential difficulties, the business school says that growing business confidence has carried the economy forward against the drag of tightened monetary policy. The ending of the miners' strike and the easing of interest rates from their "crisis level" in January both helped to improve the business climate, it says.

This improvement is underlined by the CBI's June survey of 1,700 companies, which indicated buoyant order books and a continued rising trend for output, with a significant easing of inflationary pressure over the next four months. Export orders also appeared to be well up on last year's levels although not quite as buoyant as in the spring.

On balance companies reported that their order books were close to "normal" levels, after eight years in which they were said to be "below normal". A balance of 23 per cent of firms expected output to rise over the next four months. This was slightly down from the peak of 28 per cent in March, but well up on the response last autumn.

Currency options battle looms in London

By Barry Riley in London

THE BATTLE for the London market in traded currency options gets under way on Thursday with the launch of a sterling-dollar options contract by the London International Financial Futures Exchange (Liffe).

Some six weeks' lead has been gained by the London Stock Exchange, which began trading its own sterling-dollar option on May 16. Last week the stock exchange launched its second currency option, a dollar-D-Mark contract.

Most observers think it unlikely that both markets can succeed side-by-side to the same financial centre. "There isn't room for both of us," said a broker at one of the leading stock exchange firms specialising in options.

Liffe's chief executive, Mr. Michael Jenkins, admits that a fight is ahead. "What needs to happen in one time zone is that one market has better liquidity and the business tends to gravitate to that one," he said last week.

Both markets are offering comparable contracts, although Liffe's is twice as big at £25,000 (\$31,500), and the futures market is offering a new type of margining facility which it hopes will attract more trading and boost liquidity.

Not only is Liffe starting second, but it has failed to make much of an impact with its existing currency futures contracts. Moreover, it has no previous experience in options, though it is launching another — an option on its successful Eurodollar futures contract — on the same day as its entry into currency options.

On the other hand, it has been able to attract a large number of members to its new options section, which is constituted as a separate company called Liffe Options. Some 113 trading firms have bought a total of 150 permits to trade (each individual trader must be backed by a permit).

In all, 105 existing members of Liffe and eight new members have paid over £1m to join the options market. "It's better than we planned for. We've been very pleased with the support," Mr. Jenkins said.

Mr. Jenkins also points to the large attendance at educational courses run by Liffe, including corporate treasurers who never came to similar courses on the use of currency futures.

The presence of a large number of banks and other financial institutions among Liffe's membership is a hopeful sign for its new traded currency options activity. Only two or three banks have so far joined the stock exchange's options market, although the rules were specially relaxed to allow in firms that were not members of the parent exchange.

But the stock exchange's volume in sterling-denominated options is regarded as encouraging, at an average of 850 contracts a day so far.

Initial volume in the dollar-D-Mark contract has been less auspicious. Only 128 contracts were traded on Friday, for example.

The stock exchange is pinning its main hopes on the benefits of a planned link with the Philadelphia Stock Exchange, which trades large volumes of currency option contracts, with an estimated 40 per cent of the business originating from Europe.

Philadelphia at present trades six currency classes, and recent volumes have been running at over 300,000 contracts a month. In the autumn, the London and Philadelphia markets are aiming at "interlinkability" so that positions taken out in one can be closed in the other.

Effectively, this will create a trading day of 11½ hours running from 8.15am London time to 2.30pm eastern standard time in Philadelphia.

Liffe's executives have given a lot of thought to the creation of trading connections with other markets — it has also had discussions with Philadelphia, for example — but there are no prospective links in view at present.

"We didn't want to use the Philadelphia clearing and margining arrangements," Mr. Jenkins said. "On balance, we felt it was better to go our own way. But links could develop in due course with other U.S. exchanges."

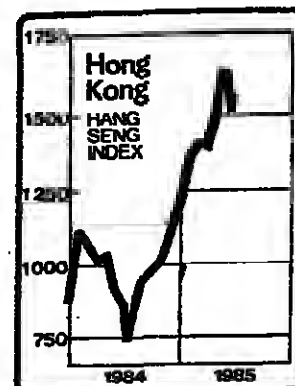
In any case, some observers argue that Philadelphia is vulnerable to increasing competition from other markets in the U.S., where the Chicago Board Options Exchange is expected to move into currency options in the autumn.

But in London the confrontation begins in earnest on Thursday, when Mr. Norman Tebbit, Britain's Secretary of State for Trade and Industry, will give the signal for the trading pit to be catapulted into lively action.

According to Mr. Jenkins, it will take some time for the winning market to emerge. The outcome will depend on the liquidity experienced by users of the market.

THE LEX COLUMN

Bulls in the China shop



Before last year's settlement cleared the air, Hong Kong was a market so dominated by the distant prospect of 1997 that investors could be confident only in one thing: at around 750 last summer, the Hang Seng index was either much too low or fiendishly inflated. By shortening the investor's focus, the Howe agreement made it possible to value the market on a slightly less irrational basis; prices have since doubled.

One facet of this change is that Hong Kong has moved from being mesmerised by the vision of China as a political menace, to seeing the country as an enormous commercial opportunity. Though the deep-seated worry about a Great Leap Backward in Peking has not been eradicated — nor should be — a much more present consideration is that China's shortage of hard currency will mean a clamp down on exports to the mainland.

Regulation

The revival of confidence in the colony's financial system — supported by a tightening property market — has given a new lease of life to the old ambition of capturing the Far Eastern slot in the 24-hour world financial market. Here, too, immediate problems have erupted to obscure an attractive long-term prospect. Just as Tokyo is starting to look a fraction less attractive, the collapse of Hong Kong's inauspiciously named Overseas Trust Bank has reminded everyone that the posting of Red Guards in Central District is not the only threat to Hong Kong's free and easy market place; higher financial supervision could also cramp its style.

New banking rules are indeed shortly to tighten up liquidity and capital ratios as well as reporting requirements. It must be hoped that stiffer regulation will on balance have a positive effect on Hong Kong's future as a financial centre, mainly by making foreign banks feel easier about putting their money out in the local interbank market. But there is also a worry that any move in this direction will tend to restrict liquidity before it has much effect on the more inventive activities of the OTBs.

Perhaps it would be asking too much for Hong Kong to make the most of its traditional financial role and also reap the full benefits of its position as a conduit to the rapidly liberalising mainland economy.

Leverage

Property companies' asset values were written down so sharply in 1982 that there may be room for write-backs in the next few years. Corporate profits, meanwhile, are expected to rise by around 15 per cent to 20 per cent, leaving the market on an average p/e of 12 to 13 times 1985 earnings. While nobody expects a boom year like 1981, the increases in property demand augur well for a sustained price-rise in the next few years.

So long as OTB is not the first domino in a new sequence of banking failures, that should permit local equity investors to get back on the exciting treadmill which turns property revaluations directly into higher share prices across half the Hang Seng — and provides security for the borrowing which levers up the other half. Once this machine starts turning, and Chinese money is flowing into the colony rather than out, the market can cope with the inevitable rights issues easily enough — it has taken over HK\$2bn (\$190m) so far this year, almost as much as for the whole of 1984. But in Hong Kong, some things do not change; one false step can still be more than enough.

Baxter Travenol may launch rival bid for American Hospital

BY PAUL TAYLOR IN NEW YORK

BAXTER TRAVENOL Laboratories, the U.S. health care products group, has challenged the proposed stock-swap merger of American Hospital Supply and Hospital Corporation of America (HCA) by suggesting a counter-bid for American Hospital worth over \$3.5bn in cash and paper.

The surprise proposal appears to set up the possibility of a bid battle for American Hospital, although it could also trigger an extensive share-swap defence by American Hospital and HCA.

The proposed counter-offer, contained in a letter from Mr. Vernon Loucks, Baxter Travenol's president and chief executive, sent to Mr. Karl Bays, chairman and chief executive of American Hospital, would create a giant hospital supply group with sales of over \$3bn a year.

Under the terms of the Baxter Travenol Proposal, it would offer 3.01 Baxter Travenol shares for every American Hospital share for up to 50 per cent of American Hospital and \$50 in cash for each remaining

share. American Hospital's shares, which have been depressed since the previous merger deal was announced, closed up 52¢ on Friday at \$37 while Baxter Travenol's stock fell 75 cents to \$15½.

Baxter Travenol's move appears to be a direct, but so far friendly, challenge to the April merger agreement signed between American Hospital and HCA, the nation's largest hospital operator with earnings last year of \$298.8m on revenues of \$4.18bn.

Under that agreement, which would create a new group with assets of \$7bn and revenues of \$7.5bn, American Hospital's 72.6m outstanding shares would each be converted into three-quarters of a share in the new merged company and each of HCA's 88.1m outstanding shares would be converted on a one-for-one basis.

American Hospital noted yesterday that the agreement with HCA also provides for an exchange of stock between American Hospital and HCA under certain conditions, including a public offer by a third

party. Under this "shut-out" clause either American Hospital or HCA could trigger a provision under which American Hospital would issue and deliver to HCA 30m shares, or about 35 per cent of the then outstanding common stock, in return for 20.5m newly issued HCA shares or about 25 per cent of the company.

American Hospital noted that "it is unclear how Baxter Travenol would adjust its proposed bid if the share exchange between American Hospital and HCA does take place," and noted that if the terms remained the same Baxter Travenol would issue 188m shares, or more than double the number of shares it currently has outstanding.

The Illinois-based group also noted that the Baxter Travenol proposal will remain open for consideration until July 5. Baxter Travenol, with 1983 revenues of \$1.8bn, is considerably smaller than American Hospital, which reported net earnings last year of \$237.8m on sales of \$3.45bn.

EEC technology plan

Continued from Page 1

the UK and West Germany, determined to enforce strict budgetary discipline.

The idea of an EEC initiative for co-operation was given support last week by Unice, the European employers' organisation. Lord Pennock, the Unice president and deputy chairman of UK electronics group Plessey, said the co-operation was needed not only in research but also to an even greater extent in development, putting the basic research ideas into practice.

Speaking after an executive meeting of his organisation in Brussels, Lord Pennock said there might be occasions when European co-operation in research and development conflicted with the strict interpretation of EEC competition

rules. This should be taken into account in drafting the framework for future work, he said.

Lord Pennock will be meeting Sig Bettino Craxi, the Italian Prime Minister, tomorrow to press the employers' principal concerns, to urge the Milan summit to agree on the proposed deadline of 1992 for completion of a barrier-free internal market in the EEC, as well as an agreed high technology strategy.

The European Commission plans will include proposals for the most appropriate areas for research co-operation.

Mr. Delors told the energy committee of the European Parliament last week that a Community structure for research was needed in order to negotiate with Japan and the U.S.

Air India Jumbo crash

Continued from Page 1

yesterday. The pilot gave no distress or mayday message after his routine and trouble-free message only eight minutes earlier.

The lack of a distress message suggests the pilots were incapacitated immediately. This could have been the result of a sudden and fatal decompression of the aircraft or its instantaneous disintegration by structural failure, or an explosion.

The Jumbo was cruising at 31,000 feet and 530 mph when radar contact was lost.

A pilot's first responsibility in the event of decompression is to protect himself to keep control of the aircraft and then execute a rapid descent. An emergency button to transmit a pre-recorded mayday radio message is under his thumb on the aircraft control column.

Pritzker agrees to pay \$400m for Conwood

By Terry Dods in New York

THE Pritzker family of Chicago, one of the leading private investment groups in the U.S., is broadening its range of activities with the \$400m acquisition of Conwood, a major producer of smokeless tobacco products.

Conwood is to be merged with Dalfort Corporation, one of the Pritzker family holding companies, which also runs Braniff, the airline rescued by the Pritzkers two years ago, and the Hyatt hotel group.

Under the terms of the deal the Pritzkers are paying \$38 a share for Conwood, whose shares jumped by \$2.75 in dealings on the New York Stock Exchange on Friday to close at \$34½. Last year the company made net profits of \$28.7m, or \$2.63 a share, on sales of \$198.2m, against \$22.9m, or \$2.06 a share, on sales of \$193.7m in the previous year.

Conwood has been subject to takeover speculation for some time, following abortive talks with Gulf Broadcasting last year, when it was almost acquired for \$33.50 a share. Sales of smokeless tobacco products, which include chewing tobacco and snuff, are growing quite strongly in the U.S., particularly in the south, while cigarette sales are declining steadily.

UK export aid probe

Continued from Page 1

The Whitehall committee is expected to make recommendations about the relative size of ATP, about the efficiency of the approval system — which involves three departments and has been criticised for its slowness — and about the appropriateness of the development criteria used by the Overseas Development Administration.

The approval system has already been slightly modified in respect of some South East Asian markets, allowing the UK to initiate and not merely match a rival government's subsidy loan offer. These markets are regarded as already "spoiled" by subsidies.

The Government's declared policy to date has been to seek international curbs on the export subsidy war, and not to disarm Britain unilaterally.

However exporters and some MPs have been accusing the Treasury and to a lesser extent the Overseas Development Administration of being less than wholehearted in their support.

The recent loss of the Bosphorus Bridge contract in Turkey to the Japanese — although it was lost on price — has further stirred an 18-month-long controversy over export subsidies between industry and the Government.

World Weather

Area	Temp	Wind	Cloud	Temp	Wind	Cloud	Temp	Wind	Cloud
Amsterdam	13	20	100	13	20	100	13	20	100
London	13	20	100	13	20	100	13	20	100
Paris	13	20	100	13	20	100	13	20	100
Rome	13	20	100	13	20	100	13	20	100
Madrid	13	20	100	13	20	100	13	20	100
Barcelona	13	20	100	13	20	100	13	20	100
Brussels	13	20	100	13	20	100	13	20	100
Frankfurt	13	20	100	13	20	100	13	20	100
Hamburg	13	20	100	13	20	100	13	20	100
Munich	13	20	100	13	20	100	13	20	100
Vienna	13	20	100	13	20	100	13	20	100
Zurich	13	20	100	13	20	100	13	20	100
Berlin	13	20	100	13	20	100	13	20	100
Cologne	13	20	100	13	20	100	13	20	100
Düsseldorf	13	20	100	13	20	100	13	20	100
Essen	13	20	100	13	20	100	13	20	100
Köln	13	20	100	13	20	100	13	20	100
Leipzig	13	20	100	13	20	100	13	20	100
Moscow	13	20	100	13	20	100	13	20	100
Prague	13	20	100	13	20	100	13	20	100
Warsaw	13	20	100	13	20	100	13	20	100
Vienna	13	20	100	13	20	100	13	20	100
Zurich	13	20	100	13	20	100	13	20	100

Readings at mid-day yesterday.
S=Cloudy D=Drizzle F=Fair P= Fog M= Rain S-Snow
St-Sleet Sn-Snow T-Thunder

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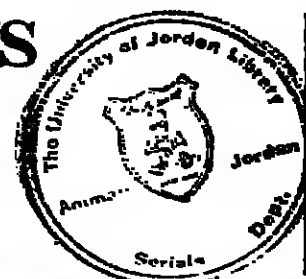
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SECTION II - COMPANIES AND MARKETS

FINANCIAL TIMES

Monday June 24 1985

**Travis & Arnold**
Timber, Building Materials, Heating and
Plumbing Equipment for the Construction
and Allied Trades. Northampton 52424.**Coca-Cola facility
puts some fizz into
Euronote market**

BY OUR EUROMARKETS CORRESPONDENT IN LONDON

COCA-COLA brought a little fizz to the Euronote market last week with a \$350m facility designed to refinance receivables owing to its Columbia Pictures unit from the sale of television and film productions.

The four-year deal, which is being handled by Salomon Brothers, is a rare offering in this market from a top-notch company, although it is structured in an unusual way designed to remove the receivables from Coca-Cola's own balance sheet.

A separate company, EBS Finance Corporation, has been formed to buy the receivables, and it will be the borrower. The facility will be secured against the receivables whose payment is guaranteed by Coca-Cola, making the deal effectively a Coca-Cola risk although there is no formal guarantee.

Terms on the deal provide for a 6% basis point fee, and the notes will be sold for a maximum yield of 1/4 point over the London interbank offered rate for Eurodollar deposits (Libor), though underwriters will receive an additional 1/4 point utilization fee if they have to take up more than half the paper.

The deal was a further reminder of how dependent the Euronote market has become on U.S. business, though bankers now say a number of British companies, including Trusthouse Forte, are now looking seriously at the Euronote market. Trusthouse would not comment on the reports on Friday.

Persuading British companies to enter the market has been a slow process of education, bankers say, and it is not helped by the fact that the Bank of England still does not allow sterling Euronotes of less than one year. Although dollar paper can be swapped into sterling, this is a more complex process than if sterling was the original currency of issue.

Elsewhere, Chase Manhattan is arranged a \$180m refinancing for

Spain's state finance house ICO, which is seeking lower rates on a \$200m credit arranged in 1981, \$20m of which will be prepaid. The new deal is for 10 years with a six-year grace period and up to half of it can bear a margin of 1/4 point over the U.S. domestic CD rate with the rest priced at a 1/4 per cent over Libor for the first two years rising to 1/2 points thereafter. The credit, ICO's third refinancing and its largest to date, currently carries interest at a margin of 1/4 point over Libor. Agent will be Industrial Bank of Japan.

Chase, whose \$1.5bn refinancing for Sweden was \$300m oversubscribed last Friday, is also arranging a smaller \$300m refinancing for the Spanish private-sector utility Iberdrua, while Lloyd's Bank is in the market with a \$30m bankers acceptance facility for Hoogovens, the Dutch steel producer.

In Latin America the World Bank has confirmed that it is to guarantee \$150m in loans for Chile as part of a financing package now being finalised with creditor banks in New York. The guarantees will form part of a \$300m co-financing for a highway project for which the bank is separately putting up \$140m. Further details of the rescheduling may be agreed this week, though one sticking point remains creditor banks' insistence that the Government guarantee private-sector debt whose repayment is to be deferred.

Originally the World Bank was considering \$250m in guarantees unconnected to a co-financing, but this ran into opposition from the U.S. and the lower amount was finally confirmed after the Government of President Augusto Pinochet lifted its state of siege last week. The unguaranteed portion of Chile's new bank loans is expected to rise to around \$850m from an original \$800m as a consequence of this change.

**Banca del
Gottardo
in share
offering**By Our Euromarkets
Correspondent

SWITZERLAND'S Banca del Gottardo is offering 60,000 bearer shares worth around SwFr 37m for sale in the Euromarkets through a group of banks led by Swiss Bank Corporation International.

The deal, the latest in a growing series of Euro-equity offerings, is intended to broaden the range of the bank's shareholders and does not involve the sale of any new equity.

Instead the bank has bought the shares from the portfolios of its own customers where it felt they were too closely concentrated and is now reoffering them to the public. The price of the issue will be set at the Zurich closing level next Friday. Last week the shares finished at SwFr 614.

The deal will not change the controlling stake held by Japan's Sumitomo Bank of 52.67 per cent.

The Bank of Finland, the country's central bank, has banned with effect from today foreign sales of quoted bonds. The ban, which will apply until further notice, is intended to shelter domestic monetary policy from a strong influx of funds from abroad, writes Our Financial Staff.

Finnish corporate borrowers have been able in recent months to obtain medium to long-term financing through the sale of bonds abroad at rates as much as 1 percentage point below the cost of short-term money market funds, now above 13% per cent.

Until now, Finnish borrowers have not had to obtain clearance from the authorities to sell bonds outside the country, although the central bank regulates other capital inflows.

Dollar issues end week on a bleak note

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT, IN LONDON

PRELIMINARY estimates showing a second-quarter U.S. growth rate of 3.1 per cent and a \$4.8bn weekly surge in M-1 money supply turned out to be bad news for the Euro-bond market last week.

On Friday prices of fixed-rate dollar issues fell sharply, by as much as 1/4 points in some cases. The few new bonds that had come to the market earlier were left trading badly outside their fees. The newly increased 10 per cent Electricité de France slid to a discount of 4 per cent, for example, but other prestigious names were hit hard too. Procter & Gamble were at less 3% and Eurofima at less 3% per cent.

The problem was that the economic and monetary data were enough to shake the faith of even the most fervent supporter of lower interest rates. And with Wall Street now looking to a heavy U.S. Treasury funding programme this week, the outlook is not all that bright.

Worse still, issue managers spent so much time last week working over alternative sectors such as floating-rate notes and other currency issues that there may not be that much more scope for new business there. At all events the massive flow of international bond issues almost came to an abrupt halt on Friday as the U.S. data was absorbed.

But none that did appear was a highly successful capped floater for Mitsui Bank which started off at just \$100m and was increased on issue to \$150m. Westpac Banking's issue of Thursday was also increased by the same amount. That seems to give the lie to those who had argued earlier that the maximum coupon feature on these bonds had been overdone in a glut of issues which last week totalled \$1.18bn.

The truth is a little more complex, however, as the weak performance of some other issues for Allied-Irish and Crédit Lyonnais shows. In fact, Westpac had never launched a floater before, and this was only the second deal from Mitsui. Both therefore found a ready market from buyers wishing to take on new risk.

While some more capped floaters are expected, the sector is now regarded as vulnerable, particularly in the light of rising short-term rates which make the caps look rather dangerous. Logic would suggest that the caps should therefore rise to keep them remote from current levels. In fact, they are tending to fall as the swap market tightens. Mitsui's cap was just 12% per cent whereas most of the previous issues had been set at 13%.

By contrast the much derided mismatch floaters have been helped by rising short-term rates as the yield curve steepened. Belgium's \$400m issue was launched when the difference between the two reference rates of six-month Libor and one-month Libor was 1/4 per cent. By Friday the gap had widened to 3/4, adding to potential returns and the bonds, though hardly a sell-out, were trading comfortably within their 42% point fees.

Many non-dollar sectors have also been showing signs of fatigue as the uncertain interest-rate trend is compounded by worries over the dollar strengthening again, producing currency losses for investors as well. The Euro market has been going through a period of consolidation and is still overloaded with new paper.

Last week's jumbo for All Nippon Airways totalling Ecu 130m was a slow mover as a result. It bears a coupon of 8 per cent, and as a sign that rates might be edging up again Union Bank of Finland had the market on Friday for a small Ecu 15m deal at a 1/4 per cent.

German and Swiss markets were little changed last week with the flow of new issues particularly reduced in Germany where Inter-American Development Bank's DM 250m, 7 1/4 per cent issue was well received. It is one of the few top quality names to tap the market in recent weeks.

Chemical Bank is leading its first ever Swiss issue in the form of a SwFr 130m 10-year deal for Kinder-Care, the Alabama-based giant of the U.S. day-care business. Proceeds are to be swapped into dollars.

In the New Zealand dollar sector a perplexing feature was the weakness of an earlier issue for BP, which was trading at a discount of 5 basis points despite its short, three-year life. This humiliation for such a prestigious name is particularly strange because some other deals have done much better.

For the world at large, however, the message is clear. From floaters to Australian dollar bonds, buyers have become selective, and that is always a sign that the underlying market is volatile and uncertain.

In that situation the golden rule applies even more than ever. To succeed, issues must be from the right borrower, in the right market and at the right price. Norsk Hydro pointed the way with what was perhaps the star deal of last week. Its Danish Crown issue was the first such bond for three weeks. On Friday it was increased by Dkr 50m and still it traded 2 1/2 points above its issue price of par.

First Philippine Holdings, a Philippines group with industrial and engineering interests, plans further asset sales to raise badly-needed cash with which to pay off its debts of about 700m pesos (\$37m).

After two divestment moves in favour of partly or wholly-owned Dutch buyers, First Holdings is putting more investments on the auction block.

These are its 51 per cent stake in Philippine Electric, whose plant in Taytay, Rizal Province, makes electric transformers, motor and protective devices, its 60 per cent stake in First Philippine Industrial which operates an oil pipeline between Manila and Batangas province, and unspecified stakes in two Manila-based companies, Engineering and Construction Company of Asia and Warner Barnes, a trading group.

Last week, First Holdings sold for 206.8m pesos its 28.5 per cent stakes in Philippine Petroleum

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INTERNATIONAL CAPITAL MARKETS

U.S. MONEY AND CREDIT

Economic data turns euphoria to dismay

A SHARP swing in U.S. credit market perceptions last week sent U.S. bond prices riding the see-saw of expectations — ending up with a resounding bump on the downside as a sweeping sell-off took hold.

By the close on Friday night, after an unexpectedly strong "flash" estimate of gross national product growth in the second quarter, a huge \$4.80 jump in M1, the basic money supply measure, and widespread disappointment about the lack of a Fed discount rate cut, bond prices were between 14 to 32 points lower on the week and short-term rates were sharply higher.

Wednesday marked at least a temporary turning point for the markets. Earlier in the week optimism was running high that the Fed would ease again in an effort to revive a flagging economy and cut the discount rate by half a percentage point to 7 per cent.

These hopes were bolstered first by a very weak Fed funds rate, which fell below the 7 per cent level, with only minimum intervention from the U.S. central bank to prop it up, and by

U.S. MONEY MARKET RATES (%)					
	Last Friday	1 week ago	4 weeks ago	13 weeks ago	Low
Fed Funds (weekly average)	7.00	7.00	7.00	7.00	7.00
Three-month Treasury bills	7.04	6.88	7.17	7.07	6.87
Six-month Treasury bills	7.22	6.88	7.28	7.03	6.87
Three-month T-bill futures	7.00	7.00	7.00	7.00	7.00
30-day Commercial Paper	7.25	7.25	7.50	7.25	7.25
90-day Commercial Paper	7.50	7.50	7.50	7.50	7.50

U.S. BOND PRICES AND YIELDS (%)					
	Last Friday	1 week ago	4 weeks ago	13 weeks ago	Low
Seven-year Treasury	107	107	107	107	107
20-year Treasury	104	104	104	104	104
30-year Treasury	100	100	100	100	100
New 10-year "A" Financial	N/A	111	110	107	112
New "AA" Long industrial	N/A	111	110	107	112
New "AA" Long industrial	N/A	111	110	107	112

Source: Salomon Bros (estimates).
Money Supply: In the week ended June 10 M1 rose by \$4.80 to \$290.6bn.

Further economic indicators, including a 13.7 per cent decline in May housing starts.

Adding to the market's euphoric mood the banks — catching up the pronounced decline in funding costs brought about by the recent rally — cut the prime lending rate by half a percentage point to 9.5 per cent — the lowest level for the benchmark corporate lending rate since September 1978.

The Treasury long bond yield, tracking this wave of bullish

sentiment, dropped to 10.23 per cent on Tuesday night. But investors got the jitters, as it turned out, probably for good reason. By the close the next day, hopes of a below-10 per cent long bond yield had evaporated.

In the process, Dr Albert Weisberger, First Boston's chief economist, had warned on Wednesday that "viewed as a whole, the economy continues to perform well and the outlook is good." With immaculate timing,

he also warned that earlier statistics had "substantially underestimated the level and growth of GNP."

Dr Weisberger added: "Some acceleration of GNP growth in the second half of 1985 seems probable — enough to meet the official goals of 3-4 per cent — but it will be more modest than might have been."

Finally, he noted: "Interest rates have probably overshoot somewhat on the downside, but that may not prevent them from continuing to fall so long as market participants perceive even a sporting chance that the economy might weaken."

Some market participants, however, were not in a betting mood. The credit market actually sold off ahead of the GNP flash number, which then clocked in at an unexpectedly strong 3.1 per cent. By the close on Friday bond prices had sunk further following the 4.8bn M1 increase — more than double the amount market analysts had expected.

The two numbers dealt the markets a "double-whammy" — all but dispelling hopes of a

Friday-night discount rate cut. Friday came and passed without a discount rate cut and the price retreat turned into a rout. Picking up the pieces at the end of the week, Dr Henry Kaufman of Salomon Brothers noted that the flash GNP estimate and the M1 number suggest "that at least part of the rapid growth of money in recent months reflects an improvement in the pace of economic activity and not just a heightened preference for liquidity."

He concluded: "Considering these developments, a further cut in the discount rate is now unlikely." Accordingly, Dr Kaufman is predicting a rebound in the funds rate back towards the 7.5 per cent level. The markets do however face

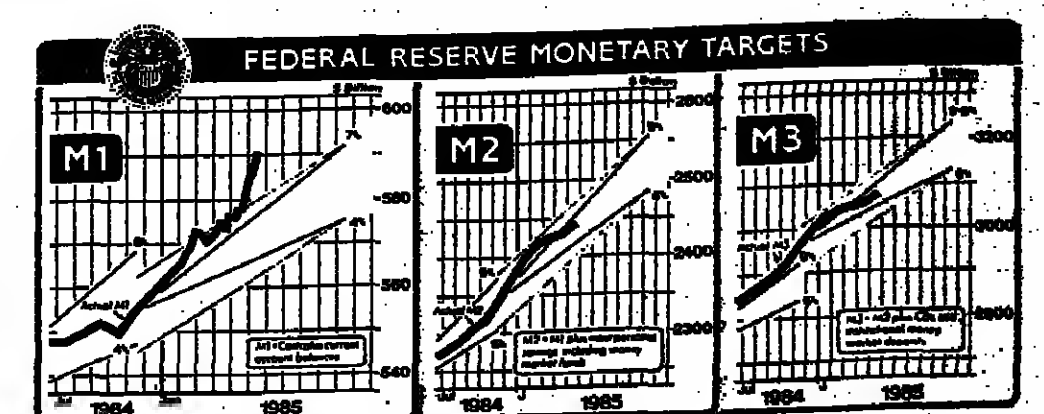
an immediate test of their resolve. After swallowing \$9.5bn of two-year notes at an average yield of 8.51 per cent on Tuesday, the markets will see what is presented with the Treasury's \$17bn end-quarter mini-refunding. The refunding kicks off tomorrow with the sale of \$6.5bn in four-year notes followed by \$6bn of seven-year

notes on Wednesday and \$4.5bn of 20-year bonds on Thursday.

Thursday is also the day Mr Paul Volcker, the Fed chairman, goes back to Capitol Hill to give testimony before a joint congressional committee. The hearing could provide him with the opportunity not only to paper over differences with Mr

Preston Martin, the Fed vice-chairman, on the international debt position, highlighted last week in an unprecedented critical public outburst by Mr Volcker against his colleague, but also to rehearse his crucial mid-July Humphrey-Hawkins monetary policy testimony.

Paul Taylor



UK GILTS

Institutions caught out by Fed-watching

FED-WATCHING becomes an ever more dangerous game, particularly from this side of the Atlantic.

The apparent certainty early last week of a cut in the U.S. discount rate persuaded many British institutions that it was time to join the foreign buyers who have been locking into high gilt-edged yields since April.

As U.S. interest rates fell and the pound climbed to over \$1.30 there were renewed murmurings of an early fall in base rates. Amid the optimism the Bank of England managed its first sales of the £200m Treasury 10 per cent 2004 top stocks.

Brokers estimated that £300 to £400m of the partly-paid issue was sold, with the authorities supplying it first at £304 and then at £301.

The demand, however, vanished as quickly as it had appeared. Thursday's flash forecast of second quarter U.S. growth and the sharp rise in U.S. M1 money supply growth, announced the same day, saw the dollar reverse its earlier losses within hours.

Investors who had paid £304

for the top stock found themselves taking on a 1 point loss. The gainers were the Bank, which managed a useful tranche of funding ahead of today's £1.2bn British Telecom call, and the taxpayer.

Hopes of a discount rate cut have not evaporated, however. Many brokers are still predicting such a move, mainly because the Fed feels uncomfortable with the dollar's present strength.

And with UK yields still among the best around, the consensus was that even if U.S. rates are now close to their floor, the international environment should continue to favour sterling instruments.

Britain's relatively high inflation rate and the uncertainties surrounding the oil price have so far been comfortably absorbed by the yield differential between London and other markets.

The other lesson from last week is the extent to which the gilt-edged market has become absorbed by the dollar-sterling rate.

Once the pound moves above

\$1.30 there is immediate speculation about a base rate cut and a corresponding rise in gilt prices. A fall below \$1.30 brings a parallel drop in the gilt-edged market.

The linkage itself is nothing new, but the focus has not been as sharp for some time.

Given the current volatility of the exchange rate — and the possibility of storms in the run-up to the Organisation of Petroleum Exporting Countries meeting — there are few willing to forecast the short-term outlook. Many fund managers appear content to sit tight until the trend is clear.

But on a longer term perspective, the general view is that sterling rather than the dollar will be the beneficiary of the next significant shift in their respective values.

Although gilt-edged investors have been content to shadow the pound, many brokers still appear uneasy with the domestic background.

For the past month or so they have concentrated on the above-target growth of sterling M3, but last week the emphasis shifted to fiscal policy with a spate of circulars suggesting the possi-

bility of another overshoot in public borrowing.

At the time of the Budget the Government's arithmetic could not have looked sounder, with a £50n contingency reserve available to cushion the Treasury against the usual spending overruns.

But the impact on all revenues of sterling's recovery, the follow-on costs of the miners' strike, and significant overshoots in both central and local government borrowing have eroded the market's confidence.

Brokers Phillips & Drew and W. Greenwell are both forecasting a public sector borrowing requirement in 1985-86 closer to £50n than to the official £7.2bn target.

Given that in recent years the PSBR has generally been more than £10bn, that forecast is unlikely to cause undue alarm. The renewed concern does signal, however, that the authorities cannot take it for granted that as long as sterling is strong the gilt-edged market will take everything else for granted.

Philip Stephens

FT/AIBD INTERNATIONAL BOND SERVICE

U.S. DOLLAR	Issued	Chg. on	Yield
AT&T 11 1/2 % 94	100	+0.02	10.42
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These Bonds having been sold outside the United States of America,
this announcement appears as a matter of record only.

New Issue

May 1985



AMERICAN MEDICAL INTERNATIONAL, INC.
Beverly Hills, California, USA

U.S.\$ 75 000 000

Bonds of 1985 due 1997
Interest payable annually in Swiss Francs at the rate of Sfr. 250.- per Bond
on the aggregate subscription price of 30 000 Bonds

Swiss Francs 115 380 000

SODITIC S.A.

GOLDMAN SACHS FINANZ AG

BANK HEUSSER & CIE AG
CHEMICAL BANK (SUISSE)
ROTHSCHILD BANK AG

BANQUE PARIBAS (SUISSE) S.A.
MANUFACTURERS HANOVER (SUISSE) S.A.

Amro Bank und Finanz

Kredietbank (Suisse) S.A.

J. Henry Schroder Bank AG

Banco Exterior (Suiza) S.A.
Banque Kleinwort Benson SA

Bank für Kredit und Aussenhandel AG
Banque Pasche S.A.

Compagnie de Banque et d'Investissements, CBI
Handelsfinanz Midland Bank

Daiwa (Switzerland) S.A.
Hottinger & Cie

Migros Bank

Mitsui Finanz (Schweiz) AG

Nordfinanz-Bank Zürich

Overland Trust Banca

Sanwa Finanz (Schweiz) AG

Security Pacific Bank S.A.

Sumitomo International Finance AG

These Bonds having been sold outside Australia, this announcement appears as a matter of record only.

New Issue

May 1985



BCF (BOND CORPORATION FINANCE) LIMITED
Perth, Western Australia

Swiss Francs 125 000 000
6 1/4% Bonds 1985-1995

with the guarantee of

BOND CORPORATION HOLDINGS LIMITED
Perth, Western Australia

SODITIC S.A.

BANK HEUSSER & CIE AG

BANQUE GUTZWILLER, KURZ, BUNGENER S.A.

GREAT PACIFIC CAPITAL S.A.

NIPPON KANGYO KAKUMARU (SUISSE) S.A.

Manufacturers Hanover (Suisse) S.A.

Overland Trust Banca

Amro Bank und Finanz
Banco Exterior (Suiza) S.A.
Bank Künzler AG
Banque Indosuez, Succursales de Suisse
Banque de Participations et de Placements S.A.
Banque Scandinave en Suisse
BHF Bank (Schweiz) AG
Crédit des Bergues
Daiwa (Switzerland) S.A.
Grindlays Bank Plc
The Industrial Bank of Japan (Schweiz) AG
J. Henry Schroder Bank AG
New Japan Securities (Schweiz) AG
Société Générale Alsacienne de Banque
- Groupe Société Générale -

Banca Unione di Credito
Bank für Kredit und Aussenhandel AG
Bank Leumi le-Israël (Schweiz)
Banque Nationale de Paris (Suisse) S.A.
Banque Pasche S.A.
Barclays Bank (Suisse) S.A.
Compagnie de Banque et d'Investissements, CBI
Dai-ichi Kangyo Bank (Schweiz) AG
First Chicago S.A.
Hottinger & Cie
Inter Maritime Bank
LTCB (Schweiz) AG
Samuel Montagu (Suisse) S.A.
Sumitomo Trust Finance (Switzerland) Ltd.
Volksbank Willisau AG

These Bonds having been sold outside the United States of America,
this announcement appears as a matter of record only.

New Issue

June 1985



COLECO INDUSTRIES, INC.
West Hartford, Connecticut, USA

U.S. \$ 44 480 000

Subordinated Bonds 1985-1993
Convertible into the Common Stock of
COLECO INDUSTRIES, INC.

Interest payable in Swiss Francs at the rate of 6 1/2% p.a.
on the aggregate subscription price of

Swiss Francs 80 000 000

SODITIC S.A.

BANK HEUSSER & CIE AG

MERRILL LYNCH BANK (SUISSE) S.A.

Bankers Trust AG

Compagnie de Banque et d'Investissements, CBI

Kredietbank (Suisse) S.A.

LTCB (Schweiz) AG

Amro Bank und Finanz

Bank Oppenheim Pierson (Schweiz) AG

Banque Kleinwort Benson SA

Banque Paribas (Suisse) S.A.

Banque Pasche S.A.

Chemical Bank (Suisse)

Dai-ichi Kangyo Bank (Schweiz) AG

Daiwa (Switzerland) S.A.

Grindlays Bank PLC

Nippon Kangyo Kakumaru (Suisse) S.A.

Nomura (Switzerland) Ltd.

J. Henry Schroder Bank AG

This announcement appears as a matter of record only.

US\$ 38,640,000.-

AGREEMENT TO PURCHASE BILLS OF EXCHANGE MATURING THROUGH 1994

Issued by

SAIPEM S.p.A.
Milan

accepted by

PETROLEUM PIPELINES COMPANY
Cairo

bearing the aval of

NATIONAL BANK OF EGYPT
Cairo

arranged by

SODITIC (JERSEY) LIMITED

Managers

BANCO DI NAPOLI INTERNATIONAL S.A.

CANADIAN IMPERIAL BANK GROUP

CREDITANSTALT-BANKVEREIN

INTERNATIONAL ENERGY BANK LIMITED - SFE GROUP

MANUFACTURERS HANOVER BANK (GUERNSEY) LTD.

SANPAOLO-LARIANO BANK S.A.

GENERALE BANK

BANQUE PARIBAS (LONDON)

AMSTERDAM-ROTTERDAM BANK N.V.

Italian Agent Bank

BANCO DI NAPOLI
Milan Branch

Agent

SODITIC S.A.

March, 1985

INTERNATIONAL CAPITAL MARKETS AND COMPANIES

Shell Oil
to buy
Arco petrol
stations

By Our Financial Staff

SHELL Oil, part of the Royal Dutch/Shell group, has signed a letter of intent to buy more than 400 U.S. petrol stations from Atlantic Richfield, the U.S. oil company which is undergoing a big restructuring.

The stations are located in Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, Rhode Island, Virginia and the District of Columbia.

The deal is the first major step by Arco since it announced earlier this year a restructuring programme involving plant closures, the buyback of shares and withdrawal from marketing in the north-east of the U.S.

Terms of the deal were not disclosed, raising speculation in Wall Street that the price was more in favour of Shell Oil than Arco.

Mr Ted Turner, the Atlanta media magnate, has surmounted the first regulatory hurdle in his junk-bond financed bid for CBS with the approval by the U.S. Securities and Exchange Commission of his registration statement in connection with the offer.

Mr Turner's company, Turner Broadcasting System, said it would start mailing shortly a prospectus to CBS shareholders on the \$4.5bn offer. Mr Turner said TBS looked forward to letting shareholders of CBS "determine the future course of their company."

Borregaard
marks time

By Fay Gjerster in Oslo

BORREGAARD, the Norwegian industrial group with interests in forest products, chemicals, fertilisers, foodstuffs and metals, reports stagnant profits for the first four months of 1985, compared with a year earlier, despite increased turnover as a result of acquisitions.

Profits before extraordinary items were Nkr 41.4m (\$4.7m), against Nkr 39m but the sale of a 50 per cent stake in a jointly-owned chlorine plant pushed profits after extraordinary items to Nkr 125.1m, compared with Nkr 88.4m in January-April last year. Gross external sales were 14 per cent up at Nkr 1.8bn.

Operating loss for Bumiputra

BY WONG SULONG IN KUALA LUMPUR

BANK BUMIPUTRA, the Malaysian bank which was saved from collapse by a massive rescue operation by Petronas, the Malaysian oil company, last September, has reported an operating loss of 105m ringgit (\$43m) for the year ended December 1984.

In a statement issued after a board meeting over the weekend, Mr Tan Sri Basir Ismail, the bank's executive chairman since January, said this loss was largely due to the "carrying costs" of 1bn ringgit in problem loans before they were transferred to Petronas.

However, after taking into account extraordinary gains from the sale of its 30 per cent stake in Malaysia Banking, the net after-tax profit was 480m ringgit compared

with a loss of 973m ringgit for 1983. The sale of the Malaysian banking stake to Permodalan Nasional, the Malaysian Government's investment agency, formed part of the Petronas rescue plan.

Under the plan, Bank Bumiputra wrote off 1bn ringgit of the problem loans, transferred another 1bn ringgit in problem loans to Petronas and sold off the Malaysian Banking stake in return for a 2.5bn ringgit cash injection from Petronas, which ended up with 90 per cent of the bank. The remaining 10 per cent is being held by the Finance Ministry.

The bad loans were given out by Bumiputra Malaysia Finance (BMF), the bank's Hong Kong subsidiary, to property companies, mainly the Carrian group and its

chairman, Mr George Tan, between 1980 and 1983.

The bank did not release its 1984 annual report to the press, due to "printing errors," and it was therefore difficult to make comparisons.

But excluding the "carrying costs" of the 1bn ringgit in problem loans before they were transferred to Petronas, the bank is understood to have made between 40m and 50m ringgit in profits from its normal operations last year.

The finance subsidiary's pre-tax profit fell from 7.2m ringgit to 5.3m, that of the merchant bank increased fourfold to 7.2m ringgit and BMF itself made pre-tax profits of 16m ringgit compared with a loss of 2.5m ringgit in 1983.

For the current year, Mr Ismail

said the bank is expected to earn increased profits to reduce the accumulated loss of 348m ringgit by another 25 per cent.

The bank's paid-up capital at the end of 1984 stood at 1.376m ringgit, and shareholders funds were 1,028m ringgit after taking into account the accumulated loss.

Total assets of the bank slipped by 5 per cent to 15.4bn ringgit, and in terms of assets, Malaysian Banking has now overtaken Bank Bumiputra as the leading Malaysian bank with its total assets at 18.1bn.

Since Mr Ismail took over, Bank Bumiputra has undertaken a major management overhaul, with resignations from at least six senior executives.

Gencor opens KwaZulu pit

BY GEORGE MILLING-STANLEY

GENCOR, the South African mining group, has brought a coal mine in the tribal homeland of KwaZulu, northern Natal, into production just under three years after political pressure forced General Electric of the U.S. to pull out of a proposed joint venture to develop the deposit.

The GE subsidiary, Southern Sphere Holdings, was forced to withdraw in October 1982 from what would have constituted the biggest investment by a U.S. company in South Africa for many years, when the state legislature in Connecticut, where GE has its headquarters, took steps to prevent the state pension fund from investing in any company with interests in South Africa.

The decision was a bitter blow for Chief Gatscha Buthelesi, KwaZulu's Chief Minister, who has consistently opposed the divestment campaign sponsored by the anti-apartheid movement.

Chief Buthelesi argues that investment in South Africa should be actively encouraged on the grounds that it will provide much-needed employment and therefore access to economic power for the country's black people.

The Gencor subsidiary, Trans-Natal Coal Corporation, announced last September that it planned to go it alone in developing the deposit, albeit on a smaller scale than was envisaged in the original joint venture.

Zululand Anthracite Colliery, situated 48 kilometres north-east of the KwaZulu capital of Ulundi, has been brought into production just eight months after that decision, at a cost around R6m below the budgeted figure of R86m (\$43.2m).

The mine will build up to reach full production by the end of this year, at which time annual output will be 875,000 tonnes of high-grade anthracite. Some 700,000 tonnes of this will be exported through the coal terminal at Richards Bay, close by on the Natal coast, with the remaining 175,000 tonnes being supplied to the domestic South African market.

The underground mine has sufficient reserves to support a life of 22 years.

Swiss seek market tax cuts

BY JOHN WICKS IN ZURICH

CUTS in money-market taxes and a scrapping of the sales tax on gold are called for in a motion of the Swiss Council, Switzerland's upper house. Similar demands have been made in the past year in the lower house and by banking circles.

A group of 19 of the council's 46 parliamentarians claims that Switzerland as a financial centre faces a growing fiscal disadvantage, when other countries are making considerable efforts to strengthen their position.

According to the motion's initiator, Mr Paul Buerli, a Radical Democrat, councillor, this could have a negative effect on the number of jobs in the Swiss service sector, as well as on income from direct and indirect taxation.

The motion calls for a scrapping of stamp duty on money-market paper of three months' maturity or less. In the case of maturities between three and 12 months, the proposal is for a graduation of the duty.

At the same time, it is suggested that the fiscal burden on the Swiss underwriting of Eurobonds should be abolished. On securities deals between non-Swiss clients through a Swiss broker a cut of at least half is suggested.

Elsewhere, the Buerli motion asks for a lifting of withholding tax on interest arising from interbank time deposits.

Finally, the motion requests the lifting of the federal sales tax on physical gold. This was introduced in 1980 and today amounts to 6.2 per cent.

N. AMERICAN
QUARTERLIES

HIMMEL

Hospital operator

Third quarter 1984-85 1983-84

Revenue 760.8m \$ 680m

Net profit 28.2m \$ 21.5m

Net per share 0.80 0.69

Nine months

Revenue 2,120m \$ 1,850m

Net profit 163.8m \$ 147.9m

Net per share 1.86 1.69

HOUSTON INDUSTRIES

Diversified energy

Fourth quarter 1984-85 1983-84

Revenue 507.3m \$ 469.6m

Net profit 77.0m \$ 55.0m

Net per share 0.75 0.60

Year

Revenue 4,150m \$ 4,120m

Net profit 385.3m \$ 374.7m

Net per share 4.02 3.72

NATIONAL BANK OF CANADA

Second quarter 1984-85 1983-84

Revenue 35.5m \$ 26.9m

Net profit 77.0m \$ 55.0m

Net per share 0.82 0.66

Six months

Revenue 75.5m \$ 58.5m

Net profit 175.3m \$ 141.1m

Net per share 1.75 1.41

JIM WALTER

Builder and building materials

Third quarter 1984-85 1983-84

Revenue 579.3m \$ 551.8m

Net profit 31.5m \$ 28.4m

Net per share 1.43 1.35

Nine months

Revenue 1,660m \$ 1,630m

Net profit 73.3m \$ 63.2m

Net per share 3.36 2.90

NEW INTERNATIONAL BOND ISSUES									
Borrowers	Amount m.	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer price %		
U.S. DOLLARS									
Sanofi Holdings \$	98,541	1987	12 1/2	4 1/4	100	SBGI	4.280		
Enbridge \$	100	1995	10	10	100	North Lynch	10.890		
Federated Dept. Sns. \$	100	1995	10	10 1/4	100	Goldman Sachs	10.125		
Citibank (a) \$	250	1997	12	7 1/4	100	CBSI			
KOP (a) \$	100	1997	12	7 1/4	100	Salomon Brothers			
Anglo (a) \$	400	2005	20	7 1/4	100	Morgan Guaranty			
SWP (a) \$	250	1997	12	7 1/4	100	BHP			
Swedish (a) \$	75	1997	12	7 1/4	100	Salomon Brothers	10.800		
Procter & Gamble \$	150	1995	10	10	100	Goldman Sachs	10.710		
Florida Fed. SSI \$	160	1995	10	8	36.15	Kidder Peabody			
Viacom Int. \$	50	2000	15	(7-7 1/4)	100	CSFB			
Long-Term Credit \$	100	1992	7	7 1/4	100	Samuel Montagu	10.884		
Anglo Irish (a) \$	150	1995	10	10 1/4	100 1/4	LTCB Int.			
Credit Lyonnais (a) \$	250	1997	12	7 1/4	100	Salomon Brothers			
Westpac (a) \$	150	1997	12	7 1/4	100	Credit Lyonnais			
100 2010 \$	100	2010	25	7 1/4	100	Morgan Stanley			
Prison Bond (Germany) \$	150	1993	5	8 1/4	100	Salomon Brothers			
John Labatt \$	100	1995	10	10 1/2	99 1/2	North Lynch	10.804		
Laminator Ship. \$	50	1990	5	9 1/4	100	Donnerstag Credit	9.375		
Kyushu \$	30	1995	10	(3 1/2)	100	Nomura Int.			
Mitsui Bank (a) \$	150	1997	12	7 1/4	100	Mitsui Fin. Int.	7.150		
Tokai Dept. Sns. \$	50	1990	5	7 1/4	100	Nomura Int.			
CANADIAN DOLLARS									
Hamilton-Wentworth \$	25	1985	10	10 1/4	99 1/4	Wood Gundy	10.702		
AUSTRALIAN DOLLARS									
C. Wright \$	100	1990	5	12 1/4	100 1/4	SBGI	12.884		
New South Wales \$	48	1990	5	13 1/4	100 1/4	Orion Royal Bank	12.948		
NEW ZEALAND DOLLARS									
DC Bank \$	50	1990	5	15 1/2	100 1/4	Morgan Guaranty	10.423		
D-MARKS									
Post & Tel (S.A.P.) \$	100	1990	5	7 1/4	99 1/4	Deutsche Bank	7.812		
Post & Tel (S.A.P.) \$	100	1993	8	7 1/4	100	Deutsche Bank	6.800		
250 1995 \$	250	1995	10	7 1/4	100	Deutsche Bank	7.350		
SWISS FRANCES									
Paribas Corp. \$	100	1995	-	8 1/4	100	Swissair	8.300		
Swissair \$	80	1990	-	3 1/4	100	SBGI	3.320		
SNCF \$	10	1990	-	5 1/4	100	LTCB (Swissair)	8.750		
Swissair \$	20	1990	-	5 1/4	100	UBS (Swiss)	8.750		
World Bank \$	200	1990	-	5 1/4	100	UBS	8.825		
World Bank \$	200	1991	-	5 1/4	100	SBGI	8.825		
World Bank \$	250	1992	-	5 1/4	100	Credit Suisse	8.750		
Gencor \$	25	1990	-	7 1/4	100	Swissair	8.811		
Mitsubishi \$	60	1990	-	5 1/4	100 1/4	SBGI	8.811		
Harvey Co. \$	140	1990	-	(1 1/4)	100	Banque de Commerce			
Japan Fin. Corp. \$	100	1995	-	(5 1/4)	100	Credit Suisse	8.817		
Kinder-Care \$	130	1995	-	5 1/4	99 1/4	Chemical Ind. (Swiss)			
Pounds									
Edis \$	50	1992	7	8	100 1/2	Edis \$	9.803		
Edis \$	50	1992	7	8 1/4	99 1/4	Edis \$	9.874		
Edis \$	55.5	1990	4	8 1/4	100	Mitsubishi Fin. Int.	8.700		
Edis \$	130	1995	10	8	100 1/2	Edis \$	8.822		
Korea Dev. \$	50	1992	7	7 1/4	100	Edis \$	7.800		
Edis \$	20	1995	10	7	100	Edis \$			
Edis \$	15	1992	7	8 1/4	100	Edis \$			
STERLING									
Co-Op Bank (a) \$	75	2000	15	7 1/4	100	BoA Int.			
FRENCH FRANCES									
Sweden (a) \$	500	2000	15	11	100	BNP	11.000		
DANISH KRONER									
Norsk Hydro \$	250	1992	7	11 1/4	100	Copenhagen Handelsbank	11.375		
GUILDERS									
Wolfsberg Int. \$	75	1990	5	7 1/4	100	Pierson Holding P.	7.500		
YEN									
NZ Steel Dev. \$	250	1995	8	6.8	99 1/4	Nikko Secs.	8.835		

* Not yet priced. † Final terms. ** Private placement. † Floating rate note. † With equity warrants. † Maximum coupon. † 5-Dual-currency. (a) 1/2 over Libor + at issuer's option 1, 3 or 6m. (b) 1/2 over 3m Libor. (c) 1/2 over 6m Libor. (d) Redeemable after 5 yrs. (e) 1/2 over 9m Libor. (f) 1/2 over 3m Libor. (g) 1/2 over 6m Libor. (h) 1/2 over 9m Libor. (i) 1/2 over 12m Libor. (j) 1/2 over 3m Libor. (k) 1/2 over 6m Libor. (l) 1/2 over 9m Libor. (m) 1/2 over 12m Libor. (n) 1/2 over 15m Libor. (o) 1/2 over 18m Libor. (p) 1/2 over 21m Libor. (q) 1/2 over 24m Libor. (r) 1/2 over 27m Libor. (s) 1/2 over 30m Libor. (t) 1/2 over 33m Libor. (u) 1/2 over 36m Libor. (v) 1/2 over 39m Libor. (w) 1/2 over 42m Libor. (x) 1/2 over 45m Libor. (y) 1/2 over 48m Libor. (z) 1/2 over 51m Libor. (aa) 1/2 over 54m Libor. (ab) 1/2 over 57m Libor. (ac) 1/2 over 60m Libor. (ad) 1/2 over 63m Libor. (ae) 1/2 over 66m Libor. (af) 1/2 over 69m Libor. (ag) 1/2 over 72m Libor. (ah) 1/2 over 75m Libor. (ai) 1/2 over 78m Libor. (aj) 1/2 over 81m Libor. (ak) 1/2 over 84m Libor. (al) 1/2 over 87m Libor. (am) 1/2 over 90m Libor. (an) 1/2 over 93m Libor. (ao) 1/2 over 96m Libor. (ap) 1/2 over 99m Libor. (aq) 1/2 over 102m Libor. (ar) 1/2 over 105m Libor. (as) 1/2 over 108m Libor. (at) 1/2 over 111m Libor. (au) 1/2 over 114m Libor. (av) 1/2 over 117m Libor. (aw) 1/2 over 120m Libor. (ax) 1/2 over 123m Libor. (ay) 1/2 over 126m Libor. (az) 1/2 over 129m Libor. (ba) 1/2 over 132m Libor. (bb) 1/2 over 135m Libor. (bc) 1/2 over 138m Libor. (bd) 1/2 over 141m Libor. (be) 1/2 over 144m Libor. (bf) 1/2 over 147m Libor. (bg) 1/2 over 150m Libor. (bh) 1/2 over 153m Libor. (bi) 1/2 over 156m Libor. (bj) 1/2 over 159m Libor. (bk) 1/2 over 162m Libor. (bl) 1/2 over 165m Libor. (bm) 1/2 over 168m Libor. (bn) 1/2 over 171m Libor. (bo) 1/2 over 174m Libor. (bp) 1/2 over 177m Libor. (bq) 1/2 over 180m Libor. (br) 1/2 over 183m Libor. (bs) 1/2 over 186m Libor. (bt) 1/2 over 189m Libor. (bu) 1/2 over 192m Libor. (bv) 1/2 over 195m Libor. (bw) 1/2 over 198m Libor. (bx) 1/2 over 201m Libor. (by) 1/2 over 204m Libor. (bz) 1/2 over 207m Libor. (ca) 1/2 over 210m Libor. (cb) 1/2 over 213m Libor. (cc) 1/2 over 216m Libor. (cd) 1/2 over 219m Libor. (ce) 1/2 over 222m Libor. (cf) 1/2 over 225m Libor. (cg) 1/2 over 228m Libor. (ch) 1/2 over 231m Libor. (ci) 1/2 over 234m Libor. (cj) 1/2 over 237m Libor. (ck) 1/2 over 240m Libor. (cl) 1/2 over 243m Libor. (cm) 1/2 over 246m Libor. (cn) 1/2 over 249m Libor. (co) 1/2 over 252m Libor. (cp) 1/2 over 255m Libor. (cq) 1/2 over 258m Libor. (cr) 1/2 over 261m Libor. (cs) 1/2 over 264m Libor. (ct) 1/2 over 267m Libor. (cu) 1/2 over 270m Libor. (cv) 1/2 over 273m Libor. (cw) 1/2 over 276m Libor. (cx) 1/2 over 279m Libor. (cy) 1/2 over 282m Libor. (cz) 1/2 over 285m Libor. (da) 1/2 over 288m Libor. (db) 1/2 over 291m Libor. (dc) 1/2 over 294m Libor. (dd) 1/2 over 297m Libor. (de) 1/2 over 300m Libor. (df) 1/2 over 303m Libor. 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(nl) 1/2 over 1101m Libor. (nm) 1/2 over 1104m Libor. (nn) 1/2 over 1107m Libor. (no) 1/2 over 1110m Libor. (np) 1/2 over 1113m Libor. (nq) 1/2 over 1116m Libor. (nr) 1/2 over 1119m Libor. (ns) 1/2 over 1122m Libor. (nt) 1/2 over 1125m Libor. (nu) 1/2 over 1128m Libor. (nv) 1/2 over 1131m Libor. (nw) 1/2 over 1134m Libor. (nx) 1/2 over 1137m Libor. (ny) 1/2 over 1140m Libor. (nz) 1/2 over 1143m Libor. (oa) 1/2 over 1146m Libor. (ob) 1/2 over 1149m Libor. (oc) 1/2 over 1152m Libor. (od) 1/2 over 1155m Libor. (oe) 1/2 over 1158m Libor. (of) 1/2 over 1161m Libor. (og) 1/2 over 1164m Libor. (oh) 1/2 over 1167m Libor. (oi) 1/2 over 1170m Libor. (oj) 1/2 over 1173m Libor. (ok) 1/2 over 1176m Libor. (ol) 1/2 over 1179m Libor. (om) 1/2 over 1182m Libor. (on) 1/2 over 1185m Libor. (oo) 1/2 over 1188m Libor. (op) 1/2 over 1191m Libor. (oq) 1/2 over 1194m Libor. (or) 1/2 over 1197m Libor. (os) 1/2 over 1200m Libor. (ot) 1/2 over 1203m Libor. (ou) 1/2 over 1206m Libor. (ov) 1/2 over 1209m Libor. 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* Not yet priced. † Final terms. ** Private placement. † Floating rate note. † With equity warrants. † Maximum coupon. † 1/2 over 3m Libor. (f) 1/2 over 3m Libor. (g) 1/2 over 3m Libor. (h) 1/2 over 3m Libor. (i) 1/2 over 3m Libor. (j) 1/2 over 3m Libor. (k) 1/2 over 3m Libor. (l) 1/2 over 3m Libor. (m) 1/2 over 3m Libor. (n) 1/2 over 3m Libor. (o) 1/2 over 3m Libor. (p) 1/2 over 3m Libor. (q) 1/2 over 3m Libor. (r) 1/2 over 3m Libor. (s) 1/2 over 3m Libor. (t) 1/2 over 3m Libor. (u) 1/2 over 3m Libor. (v) 1/2 over 3m Libor. (w) 1/2 over 3m Libor. (x) 1/2 over 3m Libor. (y) 1/2 over 3m Libor. (z) 1/2 over 3m Libor. (aa) 1/2 over 3m Libor. (ab) 1/2 over 3m Libor. (ac) 1/2 over 3m Libor. (ad) 1/2 over 3m Libor. (ae) 1/2 over 3m Libor. (af) 1/2 over 3m Libor. (ag) 1/2 over 3m Libor. (ah) 1/2 over 3m Libor. (ai) 1/2 over 3m Libor. (aj) 1/2 over 3m Libor. (ak) 1/2 over 3m Libor. (al) 1/2 over 3m Libor. (am) 1/2 over 3m Libor. (an) 1/2 over 3m Libor. (ao) 1/2 over 3m Libor. (ap) 1/2 over 3m Libor. (aq) 1/2 over 3m Libor. (ar) 1/2 over 3m Libor. (as) 1/2 over 3m Libor. (at) 1/2 over 3m Libor. (au) 1/2 over 3m Libor. (av) 1/2 over 3m Libor. (aw) 1/2 over 3m Libor. (ax) 1/2 over 3m Libor. (ay) 1/2 over 3m Libor. (az) 1/2 over 3m Libor. (ba) 1/2 over 3m Libor. (bb) 1/2 over 3m Libor. (bc) 1/2 over 3m Libor. (bd) 1/2 over 3m Libor. (be) 1/2 over 3m Libor. (bf) 1/2 over 3m Libor. (bg) 1/2 over 3m Libor. (bh) 1/2 over 3m Libor. (bi) 1/2 over 3m Libor. (bj) 1/2 over 3m Libor. (bk) 1/2 over 3m Libor. (bl) 1/2 over 3m Libor. (bm) 1/2 over 3m Libor. (bn) 1/2 over 3m Libor. (bo) 1/2 over 3m Libor. (bp) 1/2 over 3m Libor. (bq) 1/2 over 3m Libor. (br) 1/2 over 3m Libor. (bs) 1/2 over 3m Libor. (bt) 1/2 over 3m Libor. (bu) 1/2 over 3m Libor. (bv) 1/2 over 3m Libor. (bw) 1/2 over 3m Libor. (bx) 1/2 over 3m Libor. (by) 1/2 over 3m Libor. (bz) 1/2 over 3m Libor. (ca) 1/2 over 3m Libor. (cb) 1/2 over 3m Libor. (cc) 1/2 over 3m Libor. (cd) 1/2 over 3m Libor. (ce) 1/2 over 3m Libor. (cf) 1/2 over 3m Libor. (cg) 1/2 over 3m Libor. (ch) 1/2 over 3m Libor. (ci) 1/2 over 3m Libor. (cj) 1/2 over 3m Libor. (ck) 1/2 over 3m Libor. (cl) 1/2 over 3m Libor. (cm) 1/2 over 3m Libor. (cn) 1/2 over 3m Libor. (co) 1/2 over 3m Libor. (cp) 1/2 over 3m Libor. (cq)

INTERNATIONAL APPOINTMENTS

Dinger takes MTU lead after Zimmerman killing

BY JONATHAN CARR IN FRANKFURT

DR HANS DINGER has been appointed chief executive of Motoren- und Turbinen-Union (MTU), the West German aero-engine concern, in succession to Dr Ernst Zimmermann who was shot dead by terrorists early this year.

Dr Dinger, who was 58 on Saturday, was deputy chief of MTU from 1978, and took over the acting leadership following Dr Zimmermann's death.

Following Friday's appointment by the supervisory board, he becomes head of a group with a labour force of 12,000

and a likely turnover this year of DM2.2bn — more than one third in the military sector.

Dr Dinger, a trained engineer and an expert in propulsion technology, is taking over the company at a key moment in its history. It was recently announced that Daimler-Benz, the vehicle maker, was taking full control of MTU, which it formed on a 50-50 basis with the MAN engineering company in 1969.

Dr Dinger's links with Daimler-Benz go back a long way — as far as 1951 when he

Switch at Union Bank of Finland

By Olli V. Virtanen in Helsinki

UNION BANK OF FINLAND, one of the two major Finnish banks, has combined its international and corporate banking sectors under the same management, headed by Mr Paavo Lahtinen, currently the head of UBF's international banking operations.

The reorganisation also involves the formation of two other divisions, finance operations and branch network and retail banking. The former will be headed by Mr Erik Stenwall. All three will be deputy chief general managers, while Mr Arto Hirvonen will remain chief general manager and Mr Mika Tiivola chairman and chief executive.

UBF explains the reshuffle as being the result of growing internationalisation of its mainly Finnish corporate customers. A UBF spokesman says the bank's strategy is now geared more towards that of an international bank acting in international markets rather than having the international operations headed in Helsinki.

The Finnish bank has expanded its international operations heavily in the past couple of years. It recently acquired the entire share capital of American Scandinavian Banking Corporation in New York. It also has wholly-owned subsidiaries in Luxembourg and Singapore. In London it is involved in two operations, having a branch of its own and a share in Scandinavian Bank, the consortium bank. UBF has also representative offices in Los Angeles, Moscow, Sao Paulo, Stockholm, Tokyo and Zurich.

Wasau outlook made obscure

BY TERRY SYLAND IN NEW YORK

THE RESIGNATION of Mr John A. Schoneman as chairman and chief executive officer of Wasau Insurance, the Wisconsin mutual insurance group, leaves the management outlook obscure. Mr Schoneman, who linked his resignation to Wasau's \$207m loss in the fiscal year, has been temporarily succeeded by Mr Thomas Hancock, who is 71 years old. Mr Dwight Davis, corporate affairs spokesman, says that no decision had yet been taken on a permanent replacement to Mr Schoneman.

Wasau has been suffering losses on its property and

casualty insurance, and also on medical malpractice policies which it ceased writing nine years ago. Other problem areas have included auto insurance and some high risk casualty sectors. Although no details have been released of current trading, Wasau expects to return to profitability by 1986.

"A broad-based recovery programme has been introduced, which we hope will be showing results by next year," says Mr Davis. The 1984 loss represented a substantial downturn for Wasau, which earned \$20.6m in the previous year. Premium income has consistently run above the \$1bn mark.

Mr Schoneman is believed to have offered his resignation when last year's results were first announced, but his departure appears to have been unscheduled.

No other management changes have been made, although Mr Schoneman is understood to have recommended several other moves before he left the company.

Mr Hancock has been on the Wasau board for 16 years, and is chairman of the board's executive committee.

Bioul takes chair at Henrijean

JEAN-MARIE BIOUL, managing director of Marsh and McLennan, the New York based insurance broking concern, has been appointed chairman of Henrijean and Cie, the Marsh and McLennan offshoot which claims to be the largest insurance brokerage company in Belgium.

He succeeds Baron Philippe Snoy, who retired at the beginning of the month, as managing director of Marsh and McLennan and chairman of Henrijean.

Ghassan Sami Nachawi has joined the BAH Bank Corporation, New York, as a senior vice president, in charge of international and correspondent banking activities.

Intercontinental Hotels gives lead to Sternik

BY ARTHUR SANDLES

MR HANS G. STERNIK, president and chief operating officer of Intercontinental Hotels, the Grand Metropolitan subsidiary, is to become chief executive officer of the corporation on October 1. He succeeds Mr Paul Sheeline, who is chairman and chief executive officer. Mr Sheeline will remain as chairman of the board and a member of the executive committee.

Mr Sternik will continue as president and will become a member of the executive committee.

Mr Sheeline, who is 63, joined Intercontinental in 1966, and became chief executive officer in 1971. Under his direction the corporation has grown from having 49 hotels that year to the present 97, while sales have

risen from \$136m to more than \$1bn. Mr Sheeline steering Intercontinental through its purchase by Grand Met in 1981 from Pan American World Airways.

He remains a director of Pan Am and is on the board of National Westminster Bank USA.

Mr Sternik, who is 53, joined Intercontinental in 1964 as a hotel manager in Vienna. He became chief operating officer in 1972. He was elected president in 1974 and became a director in the same year.

Mr Sheeline says, "I plan to remain active in the company's affairs for the next several years as chairman and as a consultant."

Reorganisation at Finnair

By Our Helsinki Correspondent

FINNAIR, FINLAND'S national airline, has reorganised the company's top hierarchy in an effort to ensure smooth landings at the time when the President, Mr Gunner Korhonen, retires at the end of 1986. Mr Korhonen, 67, will assume the position of the chairman of the board as of September 1. His successor will be Mr Risto Ojanen, 53, currently Finnair's marketing director and executive vice-president.

Mr Korhonen became president of Finnair in 1980.

BERISFORD CRESVALE

A Member of the S. & W. Berisford PLC Group of Companies

Announce with pleasure that from 24th June, 1985 their new address will be

Berisford Cresvale Limited
Longbow House
14/20 Chiswell Street
London EC1Y 4TD
Telephone: General 01-638 4021
Trading 01-628 2000
Telex: 8953714

New Zealand Steel Development Limited

(Incorporated in New Zealand under the Companies Act 1955)

U.S. \$300,000,000

Guaranteed Floating Rate Notes 1992

unconditionally and irrevocably guaranteed by

New Zealand

For the six month period
24th June, 1985 to 24th December, 1985

In accordance with the provisions of the Notes, notice is hereby given that the rate of interest has been fixed at 8 1/4% per annum and that the interest payable on the relevant interest payment date, 24th December, 1985, against Coupon No. 6 will be U.S. \$409.84.

S.G. Warburg & Co. Ltd.

Agent Bank

LADBROKE INDEX

965 965 (1-20)
Based on FT Index
Tel: 01-427 4211

U.S. \$125,000,000
Midland International
Financial Services B.V.
(Incorporated with limited liability in the Netherlands)
Guaranteed Floating Rate Notes 1989
Guaranteed on a subordinated basis as to payment of principal, premium (if any) and interest by **Midland Bank plc**

For the 36 months from
24th June, 1985 to 24th December, 1985
the Notes will carry an interest rate of 8 1/4% per annum.
The interest payable on the relevant interest payment date, 24th December, 1985 against Coupon No. 12 will be U.S. \$204.82 per U.S. \$5,000 Note.
Agent Bank:
Morgan Guaranty Trust Company of New York

Banco di Roma
U.S. \$150,000,000
Floating Rate Depository Receipts due 1992
Notice is hereby given that the Rate of Interest relating to the above issue has been fixed at 7.5375 per cent for period 24th June, 1985 to 24th July, 1985. Interest payable on 24th July, 1985 will amount to US\$46.81 per US\$1,000 Note.
Agent Bank:
Morgan Guaranty Trust Company of New York

Granyville & Co. Limited

Member of The National Association of Security Dealers and Investment Managers

Over-the-Counter Market

8 Lovat Lane London EC3R 8DT	Telephone 01-421 1212
Capitalisation	Change Gross Yield
2000's	142 - 3 1/2 10.0 7.1
4,798	140 - 3 1/2 10.0 7.1
2,776	138 - 3 1/2 10.0 7.1
925	136 - 3 1/2 10.0 7.1
49,286	134 - 3 1/2 10.0 7.1
2,500	132 - 3 1/2 10.0 7.1
1,312	130 - 3 1/2 10.0 7.1
7,907	128 - 3 1/2 10.0 7.1
3,800	126 - 3 1/2 10.0 7.1
21,580	124 - 3 1/2 10.0 7.1
1,144	122 - 3 1/2 10.0 7.1
812	120 - 3 1/2 10.0 7.1
14,132	118 - 3 1/2 10.0 7.1
6,676	116 - 3 1/2 10.0 7.1
32,440	114 - 3 1/2 10.0 7.1
5,120	112 - 3 1/2 10.0 7.1
8,798	110 - 3 1/2 10.0 7.1
3,616	108 - 3 1/2 10.0 7.1
18,820	106 - 3 1/2 10.0 7.1
1,440	104 - 3 1/2 10.0 7.1
1,820	102 - 3 1/2 10.0 7.1
1,470	100 - 3 1/2 10.0 7.1
11,008	98 - 3 1/2 10.0 7.1
5,251	96 - 3 1/2 10.0 7.1

Prices and details of services now available on Prestel, page 68146

This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange. It does not constitute an invitation to the public to subscribe for or purchase any shares.



Telefónica

COMPANIA TELEFONICA NACIONAL DE ESPAÑA, S.A.
Incorporated in the Kingdom of Spain with limited liability

Authorised 1,081,402,636 shares of Ptas. 500 nominal value Issued at 24th June, 1985 720,935,091

Telefónica is the exclusive supplier of domestic and international telephone services in Spain by virtue of its contract with the Spanish State and owns and operates the only Spanish public data transmission network. Telefónica also supplies associated telecommunications services in Spain and holds investments in a number of manufacturing and service companies in the Spanish telecommunications, electronics and computer sectors. On the basis of International Accounting Standards, in the year ended 31st December, 1984 turnover totalled Ptas. 365.5 billion and profit before tax was Ptas. 57.4 billion. Total assets at 31st December, 1984 were Ptas. 1,673.2 billion.

In terms of shareholders' funds, profits and market capitalisation, Telefónica is the largest company in Spain, and in 1984 accounted for 2.5 per cent of the Spanish Gross Domestic Product. The Company's shares are actively traded on the four Spanish stock exchanges (Madrid, Barcelona, Bilbao and Valencia). There were approximately 700,000 shareholders at 31st December, 1984.

Application has been made to the Council of The Stock Exchange to admit to the Official List all the 720,935,091 issued shares of Ptas. 500 nominal value each.

The Listing Particulars relating to Telefónica are available in the Exel Statistical Service and may be obtained during usual business hours on any weekday (Saturdays excepted) up to and including 8th July, 1985 from:

Morgan Grenfell & Co. Limited,
New Issue Department,
21 Austin Friars,
London EC2N 2HS

Cazenove & Co.,
12 Tokenhouse Yard,
London EC2R 7AN

24th June, 1985

Savory Mill Limited,
3 London Wall Buildings,
London EC2M 5PU

This advertisement complies with the requirements of the Council of The Stock Exchange.

Tricentrol

Tricentrol PLC

(Incorporated in England with limited liability)

£35,000,000

11 per cent. Bonds due 1992

and

4,725,000

Warrants to subscribe Ordinary Shares of 25p each in
Tricentrol PLC

The following have agreed to subscribe or procure subscribers for the Bonds and the Warrants:

Morgan Grenfell & Co. Limited

Goldman Sachs International Corp.

Barclays Bank Group
County Bank Limited
Samuel Montagu & Co. Limited

Citicorp Capital Markets Group
Deutsche Bank Aktiengesellschaft
Orion Royal Bank Limited

The issue price of one Bond of £1,000 principal amount and 135 Warrants is £1,000, made up of £954 in respect of one Bond and £46 in respect of 135 Warrants.

Interest is payable on the Bonds annually in arrear on 27 June in each year, commencing on 27 June 1986.

Application has been made to the Council of The Stock Exchange of the United Kingdom and the Republic of Ireland ("The Stock Exchange") for the Bonds and the Warrants to be admitted separately to the Official List.

Listing particulars relating to Tricentrol PLC, the Bonds and the Warrants are available in the statistical services of Exel Statistical Services Limited and may be obtained during usual business hours up to and including 26 June 1985 from the Company Announcements Office of The Stock Exchange and up to and including 10 July 1985 from the following:

Tricentrol PLC,
Capel House,
New Broad Street,
London EC2M 1JS

de Zoete & Bevan,
25 Finsbury Circus,
London EC2M 7EE

Morgan Guaranty Trust Company
of New York,
1 Angel Court,
London EC2R 7AE
24 June 1985

This advertisement complies with the requirements of the Council of The Stock Exchange.



The City of Winnipeg

(CANADA)

Canadian \$50,000,000

10% % Debentures due July 16, 1990 Series UZ

The following have agreed to subscribe or procure subscribers for the Debentures:

Wood Gundy Inc.

Banque Bruxelles Lambert S.A.

CIBC Limited

Credit Suisse First Boston Limited

Morgan Guaranty Ltd

Orion Royal Bank Limited

Salomon Brothers International Limited

Algemeene Bank Nederland N.V.
Bayerische Landesbank Girozentrale
Commerzbank Aktiengesellschaft
Samuel Montagu & Co. Limited
The Nikko Securities Co., (Europe) Ltd.
Richardson Greenfields of Canada (U.K.) Limited
Swiss Bank Corporation International Limited

Application has been made to the Council of The Stock Exchange for the Debentures, issued at 100%, to be admitted to the Official List, subject only to the issue of the global interim debenture.

The Debentures will bear interest from July 16, 1985 at the rate of 10% per annum payable annually in arrear on July 16, the first payment falling due on July 16, 1986.

Particulars of the Debentures have been circulated in the Exel Statistical Service. Copies of the particulars relating to the Debentures may be obtained during usual business hours up to and including June 26, 1985 from the Company Announcements Office of The Stock Exchange and up to and including July 8, 1985 from:-

Wood Gundy Inc.,
30 Finsbury Square,
London EC2A 1SB

Orion Royal Bank Limited,
1 London Wall,
London EC2Y 5JX

R. Nivison & Co.,
25 Austin Friars,
London EC2N 2JB

June 24, 1985

Isotron to raise £4m with an offer by tender

Profits have grown from £249,000 in 1979-80 to £703,000 for 1983-84 on turnover which has risen from just over £1m to £2.14m. For the year ended this month, the company will be forecasting profits of around £1.1m on turnover in excess of £2.5m.

Revenue	£ 3.96m	(£ 3.39m)
Revenue Profit before Tax	£ 1.43m	(£ 1.81m)
Earnings per share	13.19p	(10.57p)
Dividends per share	6.05p	(5.56p)
Net Assets per share	409p	(407p)

1984 figures in brackets

1985 Report and Accounts from
 Lynden Holdings PLC,
 7 & 8 Conduit Street,
 London W1R 0YJ
 Tel: 01-628 6463

APPOINTMENTS

Legal and General management changes

LEGAL AND GENERAL GROUP has made the following top management changes: Following the retirement of Mr E. Wynn Owen in September, Mr Peter W. Simon will become deputy group chief executive in addition to his responsibilities as general manager (investment).

Mr John K. Elbourne, currently general manager (international), becomes a member of the group board from July 1 and will take additional responsibility for group marketing and planning. Mr Alan R. Eland, head of group planning, and Mr John K. Elbourne, marketing director, will be transferred to him. As a consequence, Mr Elbourne's title will be general manager (international) and general manager (group marketing) and Mr Eland's title will be head of group marketing.

From July 1, Mr Christopher J. Blair will be appointed secretary. As a consequence, Mr Stewart Lyon's title will be changed to general manager (investment) and group chief secretary.

CALA HOMES (LOTHIAN) has made two board changes. Mr Allen Crew, managing director since 1981, is leaving to become managing director of Cala Finance based at East Meisey in Surrey. The appointment is part of a move by the parent company, Cala (The City of Aberdeen Land Association) to introduce a new managing director to the company. Mr Allen Crew, who has held a number of senior positions within the Cala group for the past five years, and is

based in Edinburgh. Mr A. J. Bell, managing director of the tube division, has joined the main board of the **SENIOR ENGINEERING GROUP**.

HOLIDAY INNS INC. has appointed Mr Wolf Vlietstra as director of projects. He is responsible for supervision of works and construction of all new Holiday Inn hotels and refurbishment in Europe.

Mr Alec Shaw has returned to the **HOGG ROBINSON GROUP** after a gap of 28 years to become managing director of Reed Stenhouse UK where he had been a board member for 14 years. He had also been responsible for Reed Stenhouse operations in Africa. He left the Hogg Robinson Group in 1956 when he worked for The Credit Insurance Association.

The general manager of **PECKHAM BUILDING SOCIETY**, Mr Nigel J. Guest, will be appointed to the board from July 1. He joined the Peckham as general manager in June 1983 from the Country Building Society, which had set up to provide building society facilities for the Country Gentlemen's Association.

Mr Bruce McCormick, commercial director of UNILEVER's international specialities division, is to join Van den Berghs and Jurgens as commercial director of the Fowles review of the professional should know (0572 822711) in the Park, W1.

CONTRACTS

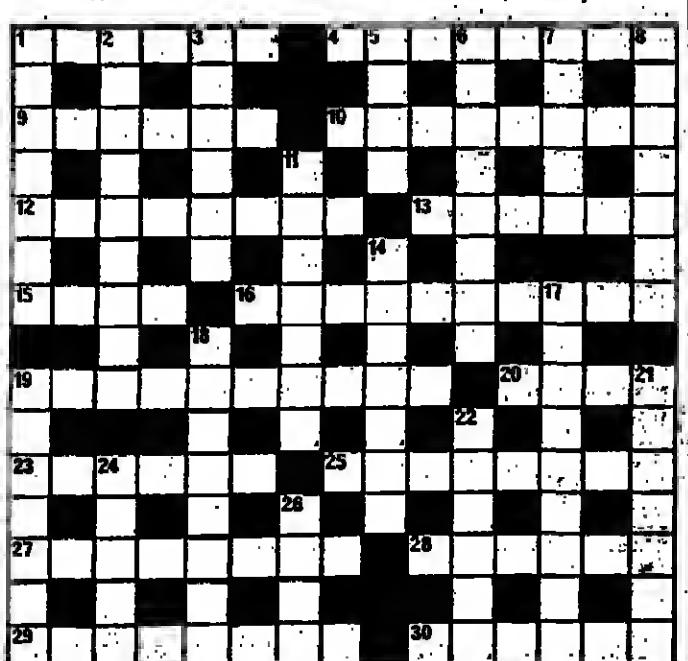
Stanton pipes for Cyprus

STANTON AND STAVELEY has won part of a major water supply contract in Cyprus. The contract is to supply more than 3,000 ductile iron pipes for an order worth £4m—with the possibility of more to come. The contract for the Cyprus Government is to supply more than 3,000 ductile iron pipes for an order worth £4m—with the possibility of more to come. The contract for the Cyprus Government is to supply more than 3,000 ductile iron pipes for an order worth £4m—with the possibility of more to come.

the industrial and tourist areas. The overall contract was won against strong international competition including several steel tube companies, with Pont-e-Mousson—Stanton's new joint company—leading the Anglo-French effort to ultimate success.

BALEFOUR BEATTY will carry out next month's construction work to the northbound carriageway of M1 near junction 8, at a tender price of £1.15m. The total contract lasts six weeks with severe traffic delays expected between July 2 and July 18. During the first two weeks of the contract the contractor will start preliminary signing and capping and in the final fortnight, night-time closures will be necessary, for resurfacing north of junction 8. Significant delays are unlikely during both these periods.

F.T. CROSSWORD PUZZLE No. 5751



- ACROSS**
- 1 Father's arbitrating body for a noisy quarrel (6)
 - 4 Mr T—can he with changes make a businessman? (9)
 - 6 March back, heartlessly, to banish (6)
 - 10 Firm to stand endless growth (8)
 - 12 Racket haters might use them (6)
 - 13 Describes a clock associated with spring (6)
 - 15 Continues support (4)
 - 16 Street queue sat out, having formal dignity (6)
 - 19 Comprehend where structure's foundations are (10)
 - 20 Opera Joe? (4)
 - 21 It's scandal if many became violent (6)
 - 25 Aarp or beef? (8)
 - 27 One drink in examination is unusual (8)
 - 28 A Rolls-Royce I have to get there (6)
 - 29 It's used to contain the panel reform initially tried in orbit (6)

- DOWN**
- 1 Restless folk sifted about round top of garden (7)
 - 2 Current measure almost on sea-shore (and characteristically) (9)
 - 3 Lily's head replaced by song in jaunty manner (8)
 - 5 Consumes some meat sandwiches (4)
 - 6 Plotted and unveiled, dull code (8)
 - 7 A death signifies regret (5)
 - 8 Old valve—rotted one finally, perhaps? (7)
 - 11 Stir up a U.S. soldier by gallery (7)
 - 14 Loud-mouthed Greek (7)
 - 17 What someone said—Get it before work starts (8)
 - 18 Piece of meat seen in apple that's dated (8)
 - 19 Even kind dress (7)
 - 21 Spicy information in boat (7)
 - 22 Rails twist round front of platform, winding (8)
 - 24 Strong fibre—hard stuff (5)
 - 26 Seen when one's light-headed? (4)

The solution to last Saturday's prize puzzle will be published with names of winners next Saturday.

IRAN SURVEY

Reprint

A bound reprint of this Survey is now available from:

Nicola Banham
Financial Times Publicity Department
Bracken House, 10 Cannon Street
London EC4A 3BY

Price £5.00. Cheques to be made payable to The Financial Times

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

June 24-25
Computers in Manufacturing (01-801 5426) Olympia

July 1-3
Insurance Information Exchange Exhibition and seminar (01-831 6900) City Conference Centre, EC3

July 2-4
P.C. Users' Show (01-537 3690) Olympia

July 9-11
National Education, Training and Development Exhibition and Conference (01-637 2400) NEC, Birmingham

July 11-20
World Wine Fair (01-222 9341) Exhibition Centre, Bristol

July 14-18
Gift Trade Fair (0282 867153) Exhibition Centre, Harrogate

July 18-19
Drives, Motors, Controls Exhibition (0799 26666) Olympia

OVERSEAS TRADE FAIRS

Current
International Chemical Fair (01-378 7775) until June 25 Bratislava

June 25-28
Info/Hong Kong Exhibition (01-891 5051) Hong Kong

June 30-July 1
European Fishing Tackle Trade Exhibition (01-681 1243) Copenhagen

July 15-20
Total Energy Exhibition (01-908 4567) Guangzhou

July 17-25
International Cultivation, Harvesting and Packaging in Viticulture, Horticulture and Veg Growing Exhibition (0890 262131) Helsinki

BUSINESS CONFERENCES

June 24-25
CommEd: Telecommunications—the European Future (01-733 3456) Dorchester Hotel, W1

June 26
Financial and Business Exhibitions: Strategies for Innovation (01-492 0000) Tara Hotel, W8

June 28
The Institute for Fiscal Studies: Corporation tax (01-636 3784) St. Erasmus Hotel, SW1

July 1
The Institute for Fiscal Studies: The implications of the Fowles review of the professional should know (0572 822711) in the Park, W1

July 1-2
Tesside and District Chamber of Commerce: Management of trade in industry (0642 240417) Golden Eagle Hotel, Thornaby, Cleveland

July 2
Royal Institute of International Affairs: European Initiatives in Information Technology (01-830 2233) Chatham House

July 2
London Chamber of Commerce and Industry: "Venice"—an oil economy. Prospects for British suppliers (01-243 4444) 100 Cannon Street, EC4

July 2-4
International Advertising Association (UK Chapter): Pan-European Conference (01-546 4800) Grosvenor House, W1

July 4-5
Longman Seminars: Copyright—new technologies and new opportunities (01-404 4756) Barbican Centre

Anyone wishing to attend any of the above events is advised to telephone the organisers to ensure that there has been no change in the details published.

Financial Times Conferences

OIL INDUSTRY DEVELOPMENTS

London—July 9 and 10, 1985

This highly topical energy conference will be chaired by Mr John Reisman and Mr Peter Gaffney. Mr Pierre Despres and Mr Leslie Murphy will discuss the value of state oil companies. Denationalisation on the scale envisaged in Britain has implications, some of them worrying, for the independents and Mr Antony Craven Walker will give a paper on this prospect. Mr Robert Evans, Chief Executive of British Gas, will talk on the future for British Gas.

Oil supply and price will again be a significant theme of the conference. Mr A. Roelandt will give a Norwegian view of the North Sea resources and prices. The position of OPEC will be the subject of analysis by Mr Robert Mabro and Mr John Lichtblau. Mr Richard Johns will give a practical analysis of developments in the Middle East.

The outlook for the refiners will be assessed by Dr Frank Schmidt and Mr Bart Collins will comment on the depth of the crisis affecting the worldwide refinery business. The outlook for petrochemicals in the light of increasing Middle East competition will be the subject of a paper by Mr Henry Rawson. Mr Vesa Ruvali will speak for the World Bank and Michel Marks for the New York Mercantile Exchange. Mr James Adamson, Mr John Silcock and Mr Michael Unsworth will be among the speakers in the financial and stock markets part of the conference.

THE CITY REVOLUTION

London—July 12, 1985

Mr Eddie George of the Bank of England is to be a keynote speaker at the highly topical Financial Times conference "The City Revolution" to be held at the InterContinental Hotel London on 12 July. Mr Gordon Pepper, Mr Stanislas Yasmovich, Mr John Quinlan and Mr Jacob Rothschild are among leading City figures who have accepted an invitation to discuss their strategies. Commentators on City developments are Lord Bruce-Gardner, Mr Richard Lambert and the Rt Hon Sir Hattersley, MP. Mr Morton Weiss from New York is to speak on new systems for London and what Smea can learn from Nasdaq. The conference is to be chaired by Mr Win Dickinson who will also speak on the opportunities for the specialist merchant banker.

All enquiries should be addressed to:
Financial Times Limited
Conference Organisation
Minister House, Arthur Street, London EC4A 3AX
Tel: 01-404 1355 (24-hour answering service)
Telex: 27342 FTCONF G
Cables: FINCONF LONDON

FT UNIT TRUST INFORMATION SERVICE

AUTHORISED UNIT TRUSTS

Trust Name	Manager	Investment Objective	Assets Under Management (£m)	Units (£)	Dividend Yield (%)	Capital Growth (%)
Barclays Bank Unit Trust	Barclays Bank	Equity	1,200	100	4.5	12.0
Barclays Bond Unit Trust	Barclays Bank	Bond	800	100	5.5	8.0
Barclays International Unit Trust	Barclays Bank	Global	1,500	100	4.0	15.0
Barclays Real Estate Unit Trust	Barclays Bank	Real Estate	600	100	3.5	10.0
Barclays Infrastructure Unit Trust	Barclays Bank	Infrastructure	400	100	3.0	9.0
Barclays Environmental Unit Trust	Barclays Bank	Environmental	300	100	3.5	11.0
Barclays Healthcare Unit Trust	Barclays Bank	Healthcare	200	100	3.0	13.0
Barclays Technology Unit Trust	Barclays Bank	Technology	150	100	3.0	14.0
Barclays Energy Unit Trust	Barclays Bank	Energy	100	100	3.0	15.0
Barclays Financial Services Unit Trust	Barclays Bank	Financial Services	50	100	3.0	16.0
Barclays Consumer Goods Unit Trust	Barclays Bank	Consumer Goods	40	100	3.0	17.0
Barclays Industrial Goods Unit Trust	Barclays Bank	Industrial Goods	30	100	3.0	18.0
Barclays Pharmaceuticals Unit Trust	Barclays Bank	Pharmaceuticals	20	100	3.0	19.0
Barclays Media Unit Trust	Barclays Bank	Media	10	100	3.0	20.0
Barclays Telecommunications Unit Trust	Barclays Bank	Telecommunications	5	100	3.0	21.0
Barclays Utilities Unit Trust	Barclays Bank	Utilities	5	100	3.0	22.0
Barclays Other Unit Trust	Barclays Bank	Other	5	100	3.0	23.0
Barclays Cash Unit Trust	Barclays Bank	Cash	5	100	3.0	24.0
Barclays Diversified Unit Trust	Barclays Bank	Diversified	5	100	3.0	25.0
Barclays International Bond Unit Trust	Barclays Bank	International Bond	5	100	3.0	26.0
Barclays International Equity Unit Trust	Barclays Bank	International Equity	5	100	3.0	27.0
Barclays International Real Estate Unit Trust	Barclays Bank	International Real Estate	5	100	3.0	28.0
Barclays International Infrastructure Unit Trust	Barclays Bank	International Infrastructure	5	100	3.0	29.0
Barclays International Environmental Unit Trust	Barclays Bank	International Environmental	5	100	3.0	30.0
Barclays International Healthcare Unit Trust	Barclays Bank	International Healthcare	5	100	3.0	31.0
Barclays International Technology Unit Trust	Barclays Bank	International Technology	5	100	3.0	32.0
Barclays International Energy Unit Trust	Barclays Bank	International Energy	5	100	3.0	33.0
Barclays International Financial Services Unit Trust	Barclays Bank	International Financial Services	5	100	3.0	34.0
Barclays International Consumer Goods Unit Trust	Barclays Bank	International Consumer Goods	5	100	3.0	35.0
Barclays International Industrial Goods Unit Trust	Barclays Bank	International Industrial Goods	5	100	3.0	36.0
Barclays International Pharmaceuticals Unit Trust	Barclays Bank	International Pharmaceuticals	5	100	3.0	37.0
Barclays International Media Unit Trust	Barclays Bank	International Media	5	100	3.0	38.0
Barclays International Telecommunications Unit Trust	Barclays Bank	International Telecommunications	5	100	3.0	39.0
Barclays International Utilities Unit Trust	Barclays Bank	International Utilities	5	100	3.0	40.0
Barclays International Other Unit Trust	Barclays Bank	International Other	5	100	3.0	41.0
Barclays International Cash Unit Trust	Barclays Bank	International Cash	5	100	3.0	42.0
Barclays International Diversified Unit Trust	Barclays Bank	International Diversified	5	100	3.0	43.0
Barclays International International Bond Unit Trust	Barclays Bank	International International Bond	5	100	3.0	44.0
Barclays International International Equity Unit Trust	Barclays Bank	International International Equity	5	100	3.0	45.0
Barclays International International Real Estate Unit Trust	Barclays Bank	International International Real Estate	5	100	3.0	46.0
Barclays International International Infrastructure Unit Trust	Barclays Bank	International International Infrastructure	5	100	3.0	47.0
Barclays International International Environmental Unit Trust	Barclays Bank	International International Environmental	5	100	3.0	48.0
Barclays International International Healthcare Unit Trust	Barclays Bank	International International Healthcare	5	100	3.0	49.0
Barclays International International Technology Unit Trust	Barclays Bank	International International Technology	5	100	3.0	50.0
Barclays International International Energy Unit Trust	Barclays Bank	International International Energy	5	100	3.0	51.0
Barclays International International Financial Services Unit Trust	Barclays Bank	International International Financial Services	5	100	3.0	52.0
Barclays International International Consumer Goods Unit Trust	Barclays Bank	International International Consumer Goods	5	100	3.0	53.0
Barclays International International Industrial Goods Unit Trust	Barclays Bank	International International Industrial Goods	5	100	3.0	54.0
Barclays International International Pharmaceuticals Unit Trust	Barclays Bank	International International Pharmaceuticals	5	100	3.0	55.0
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Barclays International International Telecommunications Unit Trust	Barclays Bank	International International Telecommunications	5	100	3.0	57.0
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Unit issues" and "Rights" Page 18

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Continued on Page 22

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FINANCIAL TIMES SURVEY

Electronics in Europe

Faced with fierce competition from the U.S. and Japan, Western Europe's electronic industries are attempting to marshal resources to make a comeback in world markets. Europe's capacity for advanced research still remains considerable

Turbulent and volatile markets

By Guy de Jouquieres

EVEN BY the standards of a business whose lifeblood is change, and where unpredictability is one of the few constants, the mid-point of 1985 finds the world electronics industry in a state of exceptional turmoil.

The exuberant growth rate which carried the industry's performance to new peaks last year is fading fast, bringing troubles in its wake. Semiconductor markets, the most sensitive barometer of activity in the sector, have been badly hit by a weakening of demand and excessive investments in capacity.

In the U.S., the computer industry is in the throes of what threatens to be a far-reaching shakeout which has already sent many smaller companies reeling and has prompted merger talks between some larger ones. In California's Silicon Valley, nervousness has abruptly replaced buoyant self-confidence, and formerly abundant supplies of

venture capital are drying up. Japan is continuing to intensify its challenge to American high-technology leadership in a range of markets, including semiconductors and telecommunications. At the same time, the Japanese themselves face new competition from other Asian countries, notably South Korea, which are mounting ambitious efforts to capture shares of international electronics markets.

Adding further uncertainty is President Reagan's proposal to spend \$26bn in research on the Strategic Defence Initiative (SDI). While there are widespread doubts that the project can attain its stated goal of providing a shield against nuclear attack, many other countries are concerned that it could give the U.S. a massive advantage in key areas of advanced technology for the rest of this century.

Amid these turbulent and confusing cross currents, Western Europe is attempting to marshal its disparate resources in a renewed bid to stage a comeback on world electronic markets, in many of which its industries have been consigned to a steadily dwindling

role for years.

For the first time, several European semiconductor manufacturers, including Philips of the Netherlands, West Germany's Siemens, SGS-Ates of Italy and France's Thomson, have committed themselves to substantial investments in the development and production of mass-produced microchips, a business which most of them have hitherto shied away from because of the high level of risk.

In the computer industry, Olivetti of Italy and West Germany's Nixdorf are both bent on ambitious expansion

in the U.S. and the Far East. The former has concluded a string of marketing and production agreements with partners including American Telephone and Telegraph, Xerox and Toshiba.

Tougher market conditions are also prompting European electronics companies, which have for decades remained at arms length from each other, to seek closer collaboration. The larger ones are all members of Esprit, the EEC-sponsored programme of advanced research in information technology.

Separately, Britain's ICL,

France's Bull and Siemens have established a joint laboratory to work on computer artificial intelligence. The EEC's four largest telecommunications companies, Siemens, Cit-Alcatel of France, Plessey of Britain and Italtel of Italy, are also working together on the development of some common components for public exchanges.

All of these moves reflect in varying degrees a recognition that unless Europe's electronics industry makes a sustained effort to catch up with U.S. and Japan, it risks losing its positions in established markets and being locked out of opportuni-

ties in new ones.

The dangers which Europe faces were clearly underlined earlier this month by the Paris-based Organisation for Economic Cooperation and Development (OECD) in its latest Economic Outlook. It stated:

"Despite considerable government interest in and encouragement of high technology in Europe over the years, its trade balance appears to be on a secular downward trend. Were these trends to continue, Europe would increasingly tend to become a net supplier to the rest of the world of food and raw materials and low technology

IN THIS SURVEY

Semiconductors	2	Software supplies	6
Telecommunications	2	IBM's strategy	6
Computer manufacture	3	Venture capital	6
Consumer electronics	3	UK developments	7
Research projects	4	France	7
Industrial collaboration	4	West Germany	7
Education and training	4	Italy	8
Application of electronics	5	The Nordic countries	8

manufactured goods, areas where competition from non-OECD countries (and certain non-European OECD countries) can be expected to become fiercer."

In semiconductors, European-owned manufacturers' share of the world market has been in steady decline for more than a decade, falling to a mere 8.5 per cent last year. Their share of the market for microchips was even smaller, only 6.7 per cent, according to Dataquest.

In computers, the Europeans' position is equally weak. ICL, Siemens and Bull, the three indigenous mainframe manufacturers, had combined sales of about \$7bn last year, less than one-sixth of the worldwide sales of IBM, the industry leader. Only Olivetti is seriously trying to compete on a Europe-wide basis against the dominant position which IBM has acquired in personal computers in the past three years.

In telecommunications, Europe appears at first sight to be stronger. It has almost a dozen public exchange manufacturers (if ITT's local subsidiaries, and AT&T and Philips are included) and the EEC overall has enjoyed a surplus in telecommunications trade.

But the underlying position is much weaker than it looks. Europe's compartmentalised national markets no longer provide the economies of scale needed to absorb the huge costs of developing modern digital equipment. Furthermore, few European companies have kept pace with the U.S. and Japanese leaders in the development of advanced customer terminal equipment.

About three-quarters of the European telecommunications

industry's sales are to national monopoly administrations. Critics charge that some of the manufacturers have grown sleepy in the absence of competition, and that they would be rudely swept aside by U.S. and Japanese companies if Europe's markets were ever opened up.

Struggle

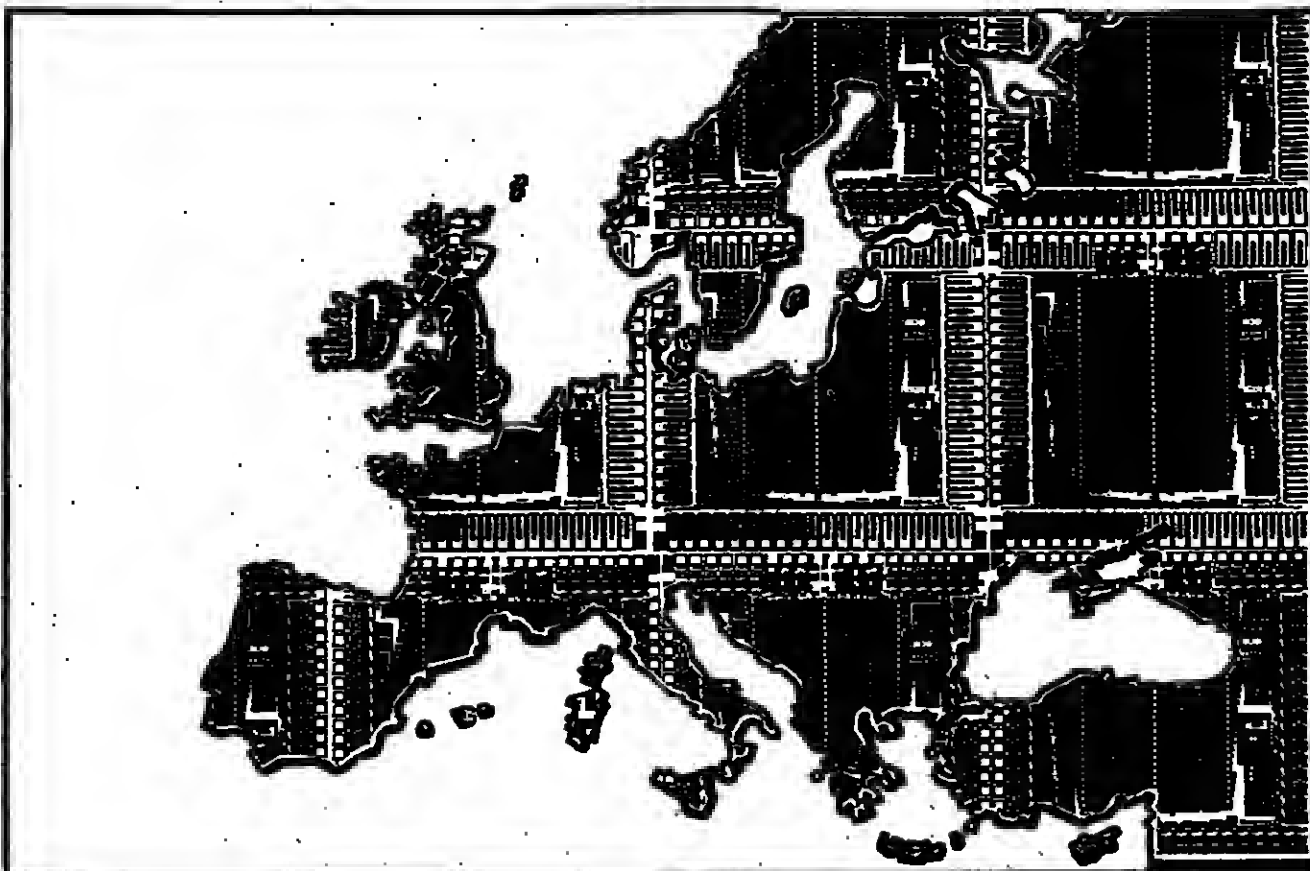
In consumer electronics, Europe is struggling to hold the ring against Japan and other Far Eastern rivals in spite of a succession of recent rationalisation moves which were supposed to improve economies of production scale. The two leading companies, Philips and Thomson, both lost money last year, and Thomson says it cannot hope to survive without extensive trade protection.

Equally disturbing is Europe's position in the application of electronics, where the picture is at best mixed. In some countries, notably West Germany, Switzerland and Sweden, traditional engineering industries are now adapting from mechanical to electronic technology quite fast. Britain, moreover, has seen the emergence of a crop of high-technology "start-up" companies in the past few years.

Overall, however, Europe suffers a serious lag. The U.S. and Japan respectively sell the EEC three and five times more computer equipment and electrical goods than they buy from it and use between four and five times more silicon chips per head of population.

Europe, nonetheless, retains some outstanding centres of

CONTINUED ON NEXT PAGE



● The pressure is mounting for Western Europe's larger electronics groups to seek closer technical collaboration—or lose new opportunities in the global marketplace.

Electronics partners in an integrated Europe

NO British electronics company is helping more than Plessey to build a stronger Europe. The key is partnership. Take telecoms, for example.

Plessey is working under a technical cooperation agreement with CIT Alcatel (France), Italtel (Italy) and Siemens (Germany) to pool resources and share know-how in switching technology.

This cooperation will enhance future strengths in technology and market development and break through the barriers previously inhibiting European telecommunications.

Take Europe's defence.

Plessey is prime contractor for Ptarmigan—the secure military communications switching system now delivered to the First Armoured Division in Germany—and for Wavell—the world's first in-service tactical automatic data processing system for improved battlefield command and control.

In radar, Plessey AR3D and Watchman systems are fully operational in Europe and, against intense worldwide competition, a consortium led by Plessey was chosen to manufacture the NATO E/F band strategic radar systems for the UK.

Now, Plessey has strengthened this overall electronics defence ability through its joint venture with Elettronica SpA, the Italian company specialising in electronic warfare.

Take semiconductors.

Plessey design bureaux give customers throughout Europe direct access to the development of unique application-specific integrated circuits. With its microsystems and connectors, too, Plessey is a pioneer supplier.

Finally, take Esprit—the massive EEC information technology programme.

Plessey is participating in 13 of the Esprit projects so far announced—including advanced microelectronics, information processing and office automation.

In Europe, and for Europe, Plessey is a vigorous partner. The Plessey Company plc, Vicarage Lane, Ilford, Essex IG1 4AQ.



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Electronics in Europe 3

Producers pin hopes
on new alliancesComputer
manufacture

ALAN CANE

ONLY ONE European electronics company, Siemens AG of West Germany, made the top 10 in the U.S. magazine Datamation's list of the world's leading data processing companies, published this month—and it was placed 10th.

Three others, Olivetti of Italy (13), Groupe Bull of France (16) and ICL of the UK (20) were in the top 20. A few more Europeans made the list: Matsushita, NEC, OKI Sharp, Toshiba and the Japanese Ministry of International Trade.

The UK was one of the first Western countries to react to the Japanese initiative. Its response was to commission a report chaired by Mr John Alvey and then to set up an "Alvey" programme of research into fifth generation topics.

The EEC established a programme called Euphrat (European Strategic Program of Research and Information Technology) involving collaboration between a number of European companies including Siemens, Groupe Bull and ICL.

Increasingly, European computer companies are looking to collaborative ventures in research and development and in marketing to increase their competitiveness.

The best example is Olivetti, which through a series of imaginative strategic alliances, is beginning to look as if it could be a world power in microcomputers, the only European company which looks likely to do so (although the UK has high hopes of ACT).

Its market share in Europe was 7.9 per cent in 1984 according to the Paris based consultancy Intelligent Electronics (against 27.5 per cent for IBM and 17.9 per cent for Apple, both of the U.S.).

tolerant computer. Businesses now depend so completely on the integrity of their computers that they cannot tolerate failure of their systems for more than a few hours—in the case of banking applications, a few seconds off the air can cost thousands of dollars.

Most companies have coped, and are still coping, by the labourious and expensive option of installing a second machine with the power turned on ready to take over if the primary system fails, the "hot back-up" option.

A small company, Tandem Computer, in the U.S. decided in the late 1970s that there must be a better way. It designed a machine in which all the essential elements, the processors, memories, storage disks and information paths were duplicated.

It also wrote complex but effective software designed to switch computing tasks between the various processors and memories in the event of a failure.

It was an expensive solution—Tandem computers typically cost upwards of \$200,000—but they gained an enviable reputation for never stopping, and that commendation was powerfully in the defence and finance.

There was no real response in Europe to Tandem's success although one or two companies, Computer Technology in the UK is an example, understood the importance of fault tolerance and modified their equipment to provide some of the important elements.

It was left to a second U.S. firm, Stratus, to move fault tolerant technology forward despite the fact that all the essential components were available to European manufacturers.

Tandem essentially attacked the problem through software. Stratus exploited the newer, very powerful and cheap microprocessors which had become available to create a computer in which every computation was carried out by four separate processing units to test for failure in any part of the system.

European response to the Japanese "Fifth Generation" computer programme has been somewhat more positive. Com-

puters to date have been sequential in their operations; they obey one instruction after another in a fixed sequence. Each instruction is implemented by a single central processing unit which becomes, therefore, a bottleneck which determines the speed of the whole system.

Computer engineers have long reasoned that machine comprising a number of processors operating simultaneously and in co-ordination offered the prospect of significantly greater computing power—power enough, in fact, to create a machine with "intelligence".

Research to create such a parallel processor had been proceeding desultorily in the U.S., the UK and mainland Europe until the late 1970s when the Japanese announced that the development of a "Fifth generation" computer of this kind was to be the object of a major research programme involving a consortium of Fujitsu, Hitachi, Matsushita, Mitsubishi, NEC, OKI Sharp, Toshiba and the Japanese Ministry of International Trade.

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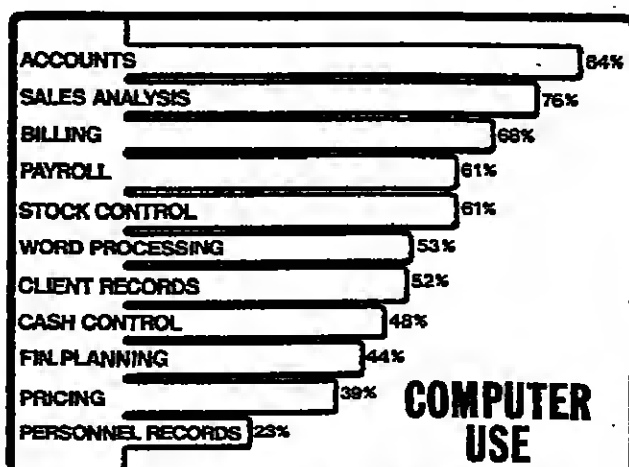
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In December 1983, it sealed an alliance with A&T, the U.S.



● The most frequent application of computer systems in the UK is for handling credit and debit accounts, while word processing is, however, the most common application for companies in the financial services sector. The use of computers for personal records is given a very low priority in many sectors of business, according to the findings of a recent survey by the Management Studies Group of Cambridge University's Engineering Department.

telecommunications giant, through which AT&T took 25 per cent of the Italian company.

A few weeks ago it announced talks with Xerox selling Olivetti personal computers in America. Only days ago it announced a new alliance with Toshiba of Japan under which the Japanese company will buy 20 per cent of Olivetti's Japanese subsidiary and the two companies will cooperate in marketing in Japan.

Computing standards are a second line of defence for the beleaguered Europeans. In large computers, most European manufacturers support the notion of Open Systems Interconnection (OSI), a set of rules governing computer specifications which means that any computer can easily be attached to any other.

At the moment they certainly cannot. The specifications for OSI are, however, not yet complete.

In the meantime, IBM is continuing to develop its proprietary computer networking system SNA (Systems Network Architecture).

At the microcomputer level, there has recently been great enthusiasm in Europe for an operating system (software which controls the computers internal operations) developed by AT & T, called Unix.

The suspicion remains that the move is directed against IBM (which chiefly uses an operating system called PC/DOS for its personal computer) rather than because of the virtues inherent in the Unix system.

European semiconductor demand

Consumption per capita in US\$

Source: Datquest, May 1985

Suppliers appeal for
imports protection

EUROPE'S CONSUMER electronics manufacturers are fast developing a siege mentality. The two largest companies — Philips and Thomson — have called for higher tariffs and lower quotas in order to fight a rear-guard action against an increasingly successful invasion from the Far East.

Japanese manufacturers which have long feared that the Europeans would increase the protection of their markets have been preparing for such a possibility.

One of the most telling indications of that fear is the fact that there are over 16 Japanese video recorder assembly plants in Europe, but none in the U.S. The European companies grimly note that in any case the U.S. consumer electronics industry has largely been destroyed over the last 15 years.

Philips, the Dutch electrical giant, and Thomson of France, the two largest European consumer electronics companies are leading cries for greater protection. They want an EEC tariff on audio and video products raised to 14 per cent for at least three years.

British companies, led by Thorn EMI, appear to prefer voluntary bilateral agreements with importing countries mainly because of the anomalies which will be caused by quota and tariff measures. In addition, the present British Government is unlikely to favour calls for protectionism.

This would mean raising the differing tariffs on VCRs (8 per cent), hi-fi (4.9 per cent) and video cameras (4.9 per cent) to the same level as colour TVs.

Philips has also suggested cuts in tariffs on those products where Europe no longer has any significant production such as film cameras, clock radios and pocket calculators.

In addition there have been a number of calls for a cut in the 17 per cent tariff on semiconductors. (It is argued that finished goods attract a lower tariff. European companies which want to compete with similar products often have to import the semiconductors and pay the 17 per cent tariff which makes them less competitive.)

In addition, the companies want to see a 19 per cent tariff on new products. Last year Philips persuaded the EEC to put a 19 per cent tariff on com-

puter disc players, the one new fast growing consumer electronics market. The move unsurprisingly upset the Japanese manufacturers — which complained because Sony had jointly developed Compact Disc technology and standards with Philips.

Even after a substantial restructuring of the industry together with strong demand for consumer electronics in most European markets the indigenous industry has still been struggling. Companies such as Thomson, Philips and Thorn EMI have been trying to stem the losses in their consumer electronics divisions.

The most significant recent changes in the industry have included Philips' acquisitions of Grundig, its long standing West German partner and Thomson

UK production facilities. GEC formed a joint venture with Hitachi and Rank teamed up with Toshiba.

But both ventures folded with the British companies withdrawing from the manufacture of colour TVs and their Japanese partners took full control of the plants. Deca, the other main producer of colour TVs, ceased when the company was taken over by Racal which sold the consumer electronics business to Taitung of Taiwan.

European efforts to protect its own video recorder industry have had very mixed results. The EEC and Japan's Ministry of International Trade and Industry (MITI) reached an agreement three years ago which limited the number of VCRs which could be imported into the Community and established a floor price which was related to the European cost of manufacture.

The main object was to give Philips and Grundig a chance to establish V2000 as a credible format and also give them sufficient economies of scale to compete.

Despite the protection V2000 was still a failure. Most other European companies, particularly Thorn EMI in Britain, Telefunken in West Germany and Thomson in France, had backed the VHS format developed and licensed by JVC. The floor price merely served to make consumers pay more for their VCRs and gave the Japanese better margins.

Imports of colour televisions into Europe appear to be comparatively low because of the high level of local production.

More worrying is the high level of imported components. The picture tube is by far the most expensive item in a TV and more than a third are imported from Japan. Its importance will only increase with the introduction of FST (Flatter Squarer Tubes) which are more expensive than conventional tubes.

However, there is little doubt that the loss-making European manufacturers believe they do not have much time in which to save the industry. But governments, keen to see Europe retain an indigenous consumer electronics industry, may not be convinced that protectionism is the solution.

Consumer
electronics

JASON CRISP

purchase of Telefunken, also of West Germany, and Saba and Nordmende.

In Britain many of the leading names in consumer electronics have bowed out since the onset of the 1970s. The UK consumer electronics companies tended to be rather insular with few sales overseas. The arrival of reliable, high-quality and low-cost Japanese colour TV sets in the 1970s precipitated a crisis. The UK companies had too small plants, old designs and a poor reputation for reliability.

Thorn's Ferguson division was the only major British company to make a successful bid to stay in the consumer electronics business. In 1979, Thorn made substantial new investments including the redesign of its sets using far fewer components, cutting its workforce, changing working methods, and installing new line equipment imported from Japan.

Other companies formed close relationships with their Japanese competitors. The idea was that the British companies would benefit from the Japanese designs and manufacturing while the Japanese companies would benefit from

SIEMENS

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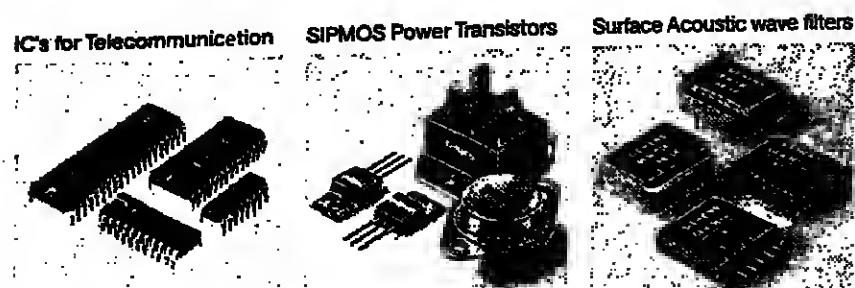
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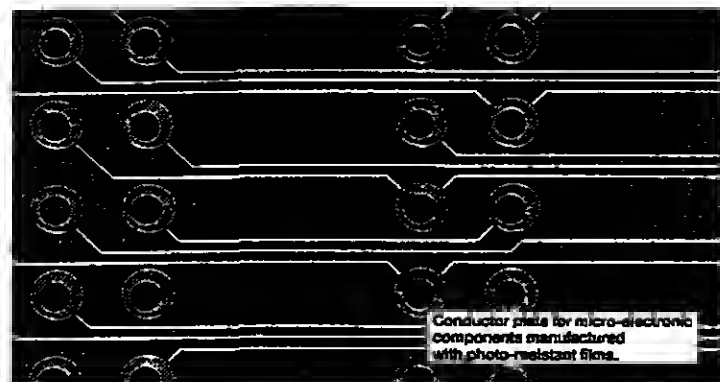
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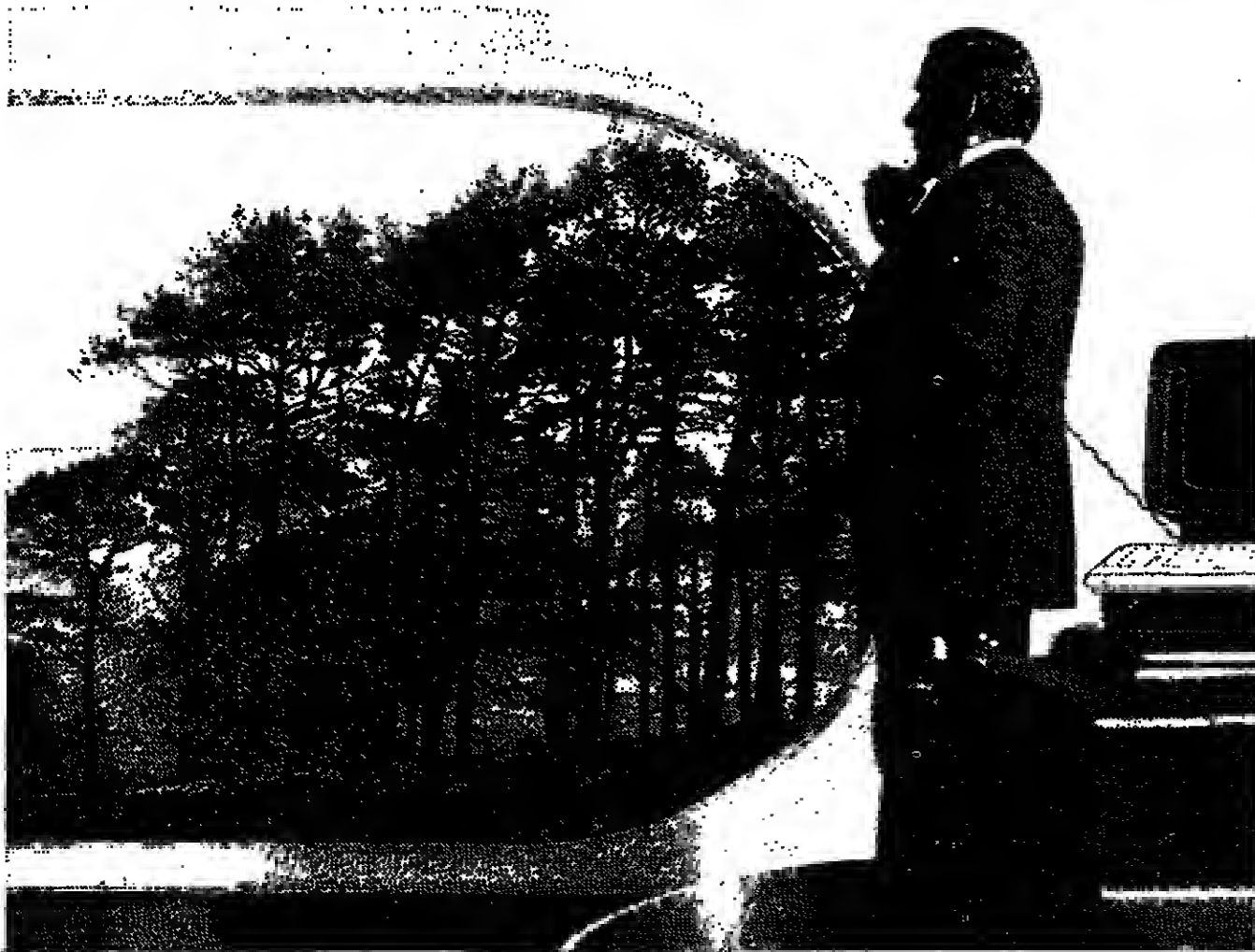
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Semiconductors

KEVIN TOWNSEND

SUCH IS the domination of world electronic markets by U.S. and Japanese manufacturers that it is easy to forget that Europe — and the UK in particular — could once be considered leaders in semiconductor technology.

The past 10 years, however, have seen a steady and consistent decline in Europe's share of world markets — and yet despite the fact that many believe that European technical ability is second to none.

One reason for the problem, according to Mr Bob Merland, a senior consultant with PA Technology is that Europe will always find difficulty in competing in the very high volume, low unit cost markets. Europe's labour costs are high and its home markets are relatively small. Britain has, however, been among the best innovators and it is this ability that the UK should major on in the future, he says.

Britain's engineering capacity for the conception of new products and architectures, such as the Lumex Transputer, should enable the UK to maintain and improve its current position — though it is the economic and timely exploitation of such ideas which Britain often fails to achieve, he adds.

"We are now beginning to offer exciting new services within the UK, such as direct-write chip fabrication using electron beam and very large scale integration (VLSI) implementations for silicon systems," he says.

These devices include all the components needed to build a system on a single chip or wafer. Europe, in general, and the UK in particular, has the skills to succeed in semiconductors — but do European managers and investors have the vision to exploit these skills before they drift again across the Atlantic?

The implication is clear. Europe could succeed in semiconductor technology, but it would need a combined European "home" market, rather

than the existing hybrid and disjointed combination of French, German, British, Nordic and Italian markets. History shows that this co-operation is unlikely, even though European governments talk passionately of the need for European co-operation. Meanwhile, the larger electronics companies will simply do what they think is best for themselves and their shareholders.

Options

So what choice is left? European manufacturers may either find a niche in the market where volume sales and cheap prices are not the sole criteria — or they can collaborate with foreign competitors.

It is known, for example, that ICL's collaboration with Fujitsu has saved many years of research and development time. And in France, the alliance between Matra and the U.S. company Harris is proving particularly profitable. (Harris is best-known for its CMOS versions of the 8086 and 8088 processors.)

Another choice is to specialise. However, if specialisation is too successful, the result would become a volume requirement, subject to the gravitational pull of the U.S. and the inexorable gaze of the Telefunken (which has also chosen the collaborative route with Mestek and Thompson CSF) illustrates this point. It claims that two new developments out of the company aimed in its own field: a range of surface-mounted LEDs, and special products represent-

ing new developments in printer and photocopier assemblies. This latter development could revolutionise the photocopier and laser printer market — a solid state electro-optic array which removes the need for moving mirrors, lenses, and fixed light sources found in even the latest alternative equipment.

The questions, however, whether the Japanese allow "their" market to be revolutionised from outside — and then, how long can Telefunken retain its leadership in the face of a concerted effort from Japan?

UK companies have a good record for innovative specialisation. One promising example is the application-specific integrated circuit (ASIC). These now provide one of the fastest-growing sectors of the world semiconductor market.

The concept was pioneered in the early 1970s in the UK by Ferranti, and many British and European manufacturers now offer comprehensive ranges of ASIC products easily able to compete with offerings from the U.S. or Japan.

Dr Bob Whelan, managing director of Array Logic, takes a similar view. The constructor of electronics products is rarely limited by the performance of electronic devices, he says, but more by the lack of advanced design techniques required to bring new systems to the market place.

The European systems market, with intermediate and potentially a number of local variations, is ideally matched to the new generation of ASICs. Although

the gate array potentially offers the systems designer new flexibility in product performance, vendors have not yet come to terms with the need for greater involvement in the system design process.

The emergence of new specialty companies dedicated to the supply of small volume and prototype gate arrays is a new phenomenon. The successful ones among these companies will offer a degree of service and support to the system company not presently available. Dr Whelan believes that there are companies which will emerge from the systems companies, not as offshoots from semi-custom vendors.

However, another UK company, Plasma Technology, has boldly claimed that it is poised to make the siliconchip obsolete — a claim based on a process that allows the deposition of high quality amorphous silicon on substrates of up to A4 paper size — compared to the current 6 in diameter available from traditional crystal growth processes.

Incidentally, the company recently announced a £500,000 funding from the Alvey Directorate aimed at helping Plasma Technology to develop the next generation of plasma-process techniques and equipment.

If Plasma Technology succeeds, it would well help other innovators succeed in their own "chess moves". Sir Clive Sinclair's venture into wafer integration is well-documented, although current optimism must be clouded by the separate problems of Sinclair Research.

Sir Clive is aiming for a billion-component chip by the end of the century, and amorphous silicon deposition may provide the route. However, while it may be a European semiconductor breakthrough that realises this goal, present trends suggest that it will not be European industry that reaps the benefits.

Speaking at the last European Solid State Circuits Conference, Sir Clive commented: "My fear is that we will not be prepared for the demand, and in particular that the British semiconductor industry will fall further behind America and Japan in volume production."

European semiconductor industry

(Figures in \$bn)

	1983	1984	1983-84
Shipments to	3.4	4.8	42.6
Production in	3.0	4.4	34.9
Production by	1.8	2.4	33.7

- In 1984, European consumption was \$4.8bn, up 42.6 per cent.
- Production (factory shipments) in Europe was \$4.4bn, up 34.9 per cent in the same year.
- Billings by European-owned companies (worldwide) were \$2.4bn, up 33.7 per cent.

Source: Dataquest.

New signs of vulnerability

Telecomms

BOB RAGGETT

TELECOMMUNICATIONS is the only large sector of Europe's electronics industry which has maintained a positive trade balance overall. Increasingly, however, this sector too feels itself to be vulnerable to the American industry and what are perceived to be the unfair advantages enjoyed by its Japanese counterpart.

Concern about industry's survival has been expressed by a number of experts, including recently Mr Herbert Ungerer of the European Commission's task force on information technology and telecommunications. Addressing a meeting of the International Telecommunications Users' Group (Intug) in Cologne, Mr Ungerer noted that while the U.S. had around 39 per cent of world telecommunications sales and Japan nearly 12 per cent, no European country had more than 6 per cent.

"If the present trend continues, by the end of the decade Europe will have a trade imbalance in this sector of \$16bn, set against a rising positive balance for the U.S. and Japan," he claimed. Mr Ungerer believes that Europe's current 4m information technology-related jobs are the key to up to 60m in the longer term, and that without a collective change of strategy many of these will be at risk.

Oddly enough, the change over from old-fashioned analogue and telecommunications equipment to digital and electronic systems is one of the root causes of Europe's vulnerability. Digital systems are not only more com-

pact, reliable and versatile than their analogue predecessors, but they are becoming cheaper to produce since the value added by labour is much smaller.

One consequence is that the maintenance of present levels of employment (or at least, the containment of job losses) which is politically expedient in all the industrialised countries of the world, can only be achieved by increased sales.

Unfortunately, worldwide production capacity for many types of digital telecommunications equipment exceeds demand.

In this context, U.S. and Japanese manufacturers appear to have a number of telling advantages. "The former, for example, have the world's biggest and most rapidly growing domestic market, and the economies of scale, which result from supplying the huge demand which this generates, make most U.S. equipment highly competitive in international markets."

Advantage

The same is true of Japanese equipment. The advantage lies not so much in the size of the domestic market as in the fact that it has traditionally been the exclusive preserve of indigenous suppliers — a situation brought about by natural preference, high tariff barriers, and complex approval and procurement procedures on the part of the national telecommunications administration.

This coupled with a willingness to pump public money and resources into national commercial enterprises, has had a "booster" effect on the industry in the post-war years.

The result is that European manufacturers are witnessing a gradual erosion of their telecommunications market share

in overseas countries, with the same consequence threatened for the collective home market.

European cultural and linguistic differences and traditional political antagonisms have hindered over time the development of telecommunications, a pattern which is not repeated in the U.S. or Japan.

Instead of an homogenous telecommunications system with a single standard against which all indigenous suppliers could manufacture equipment (and so achieve economies of scale), there are nearly as many national variations as there are nations. Worse still, the regional market which, for the most part, had fewer restrictions on overseas entry than Japan, is now opening up dramatically via the liberalisation of traditional telecommunications monopolies.

This process has been most notable in the UK, but is being repeated in other countries including Norway and Denmark. Italy, Ireland and Greece are among countries which have had fairly liberal policies vis-à-vis equipment purchases for a number of years.

The prospect of its telecommunications industry being overwhelmed by foreign competition has lent urgency to the European desire for collaborative telecommunications research projects — as exemplified by the Esprit and RACE programmes — and its quest for common standards.

The belief is that joint ventures and the adoption of European standards would act as catalyst for the expansion of the region's telecommunications and informatics markets, and provide a previously missing degree of certainty for European industry and investment. With the creation of a Community — or region-wide market, this industry could achieve the economies of scale and the

international competitiveness presently possessed by U.S. industry.

An associated strategy would be to allow access to the European market on a reciprocal basis. This would be devised to redress the enormous imbalance in trade with Japan, an imbalance which could get considerably worse if Japanese access to U.S. markets is itself restricted and the attentions of NEC, Matsushita and Fujitsu among others shift across the Atlantic. In this proposal, failure to achieve reciprocity would result in exclusion of Japanese telecommunications products from Europe.

The translation of these pan-European ideas into a reciprocal trade agreement with forms is likely to be far from easy. The sums of money which governments are prepared to subscribe for joint ventures and collaborative research are small. European manufacturers themselves are as keen on U.S. and Japanese alliances as on tie-ups with partners nearer to hand.

At the same time, there is a (perhaps unavoidable) tendency to identify the national interest with the collective good. That the French were enraged when the UK failed to short-list any EEC telephone systems to install alongside the home-grown System X probably says as much about the over-capacity of France's manufacturers as it does about BT's supposed lack of Community spirit.

The progress towards pan-European standards has been rather slow. While regional compliance with the main outlines of new standards is usual, so too are individual modifications to fit in with different national systems and operational philosophies.

On other occasions, political aspirations and/or commercial convenience hold sway. Once again the French were angered when the UK declined to collaborate with them and the West Germans on a common cellular radio system, electing instead to use modified U.S. technology.

Meanwhile, what is the place of international and multinational enterprises in the pan-European solution? Nippon Electric claims to be Europe's biggest non-indigenous hi-tech investor with nineteen local sales, service and manufacturing establishments, and IBM is actually the UK's sixth biggest exporter.

Analysis of the European manufacturers who have thus far weathered the gathering storms indicates, as one would expect, that serious commitment to research and development, superior production methods, highly motivated personnel and more highly developed marketing skills pay dividends. These qualities are also those which separate successful Japanese and U.S. companies from unsuccessful ones. For Europeans this "truth" seems to have become less self-evident somewhere along the line.

Bob Raggett is International Editor of Telephony.

A turbulent market place

CONTINUED FROM
PAGE 1

excellence. Its capacity for advanced research is considerable, both in universities and in the private sector. Several of its companies have also achieved positions of international strength against fierce competition, largely by their own efforts. For example, Sweden's L. M. Ericsson in public telecommunications and Bosch in automotive electronics.

However, much of its industry appears increasingly vulnerable in a sector where survival increasingly requires huge production scales which can only be achieved on truly global markets. The British Government warned earlier this month that the two largest telecommunications companies, Plessey and GEC, could only survive by seeking out much bigger international markets.

While their national markets remain fragmented by dis-

criminatory procurement, elaborate customs procedures and incompatible standards, it is hard for many of Europe's companies to find the necessary scale on their own doorsteps.

Many are increasingly pinning their hopes for future expansion on efforts to penetrate overseas markets, notably the U.S. Dr Wisse Dekker, chairman of Philips, has warned angrily that unless Europe makes decisive strides to remove its internal barriers, many multinational companies may pack up their bags and leave.

However, the note may in some cases also lie in the eye of the beholder. Some companies, while calling publicly for more rapid European integration and open competition, appear conspicuously reluctant to take any steps which might jeopardise their own privileged positions in home markets where they enjoy protection and government favour.

Dr Carlo de Benedetti, chairman of Olivetti, believes that many European electronics companies also exaggerate the

importance of intra-European barriers. He accuses them of looking for "alibis" and argues that the real problems lie with managements which lack entrepreneurial flair and deliberately shy away from risk.

More diplomatically, M Jean-Claude Paye, secretary general of the OECD, observes: "To be very polite about it some of our entrepreneurs and companies could be more entrepreneurial. It is a form of structural rigidity to have companies which do not change."

In any event, growing worldwide competition is likely to make it increasingly hard for electronics industries everywhere to grow fast without taking bigger risks. Some European companies are starting to square up to the challenge by boldly seizing new opportunities for expansion.

The rewards are undoubtedly there to be had. But to stay the course in today's turbulent and volatile markets will require clear business objectives, persistence and a cool nerve.

Electronics in Europe 5

A greater technical push for industry

Applications
SONIS SEDACCA

AMONG the developed countries of the world, Europe's problems in applying microelectronics technology to offices and factories are not unique, but somehow the combination of these problems have militated against it.

Trade unions, bureaucracy, geographical fragmentation of markets, and a host of other factors have all taken their toll, not to mention the wide differences in government between the European member states, all of which have different ideas about the extent to which they should be involved in directing the development of their information technology industries.

As the European Community moves on from economic harmonisation to political union, the European Commission is beginning to take a more active and aggressive role in shaping Europe's future in the field of micro-electronics.

The most important example, the European Strategic Programme for Research and Development in Information Technology (Esprit) is intended to complement national information technology projects. The aim of Esprit is to give a technological push to industry in the EEC that will enable it at least to catch up with U.S. and Japanese industry within the next 10 years.

The central "enabling technologies" of Esprit are microelectronics, advanced information processing and software technology.

The specific areas for application are office automation and computer integrated manufacturing.

Last year, the commission committed some 200m European Currency Units (ECUs) to over 100 Esprit projects. This sum was to be matched by the industrial participants in the programme.

New plans

Ninety of those projects were newly launched in July, 1984, and were selected by independent experts out of a total of 441 proposals put forward earlier that year, representing a total funding requirement of nearly 1.9bn ECUs for 1984 alone, as compared with the total of 1.5bn ECUs agreed for the first five years (1984-88) of Esprit's main phase.

To be considered as a project, project partnerships have to be formed grouping at least two "pre-competitive" industrial research facilities from different member states.

While research and development have been the initial focus of Esprit, it is now clear that the programme forms part of a broader strategic plan for market development of the European electronics and information technology industries.

The reason Europe needs Esprit, say its proponents, is that quite obviously, individual national projects have failed. Esprit is seen by the Commission as a test case for the Com-

munity's industrial development as it shifts away from agricultural issues.

But before Pan European projects such as Esprit can become effective, there are still many nationalistic barriers to be broken down, and nowhere is this more evident than in the national telecommunications monopolies, the PTTs. There can be no effective office automation in Europe without telecommunications to provide the basic infrastructure.

Two years ago, a campaign to expose the Conference of European Firms and Telecommunications (CEFT) as a price-fixing cartel was launched by the European Computing Services Association (ECSA).

Benefits

Mr Doug Eyskens, director general of the Computing Services Association in the UK, argues that although telecommunications have benefited from advances in microelectronics and satellite technology, prices have not dropped accordingly.

Mr Eyskens claims that the high costs imposed by the PTTs are a form of tariff barrier to international telecommunications, leading to a kind of protectionism which impedes the progress of information technology in Europe.

The CEFT is not a legal entity, he says — "It has no permanent employees, so it is very difficult to get to grips with it, yet it has immense power."

But now at last the EEC is trying to do something about it. For the past couple of years, it has been spurred on by Viscount Etienne Davignon, the former vice-president of the Commission who left in January this year. There is now an attempt to get the national PTTs, which together form CEFT in Europe, to be less nationalistic and to aim for harmonisation.

There are really two aspects to this, he says. One is the tariff policy and protectionism which makes Europe very inefficient and costly as a telecommunications entity. It makes it difficult to build up remote business services across Europe.

Mr Eyskens, says that the other aspect is the procurement policy of the PTTs which are some of the biggest purchasers in their countries. The PTTs tend to buy entirely from their own indigenous suppliers, and therefore European suppliers do not have the large bases to operate from like the Americans and the Japanese do.

"Davignon tried to get them to open up at least 10 per cent of their procurement, but even that is having a rough passage," he adds. "Until he 80s, it was felt that the EEC had no power over the PTTs, that you had to go through the national governments to get to the PTTs, and that the Treaty of Rome did not really apply to the PTTs because they are national bodies, rather than private bodies."

He believes that this is now giving way and, if it is felt that there is a restriction on trade, even if it is a national PTT, the EEC should be able to force

them to do something about it. There is the famous telex case of about two years ago when British Telecom was found to be in violation of the Treaty of Rome when it tried to clamp down on a telex forwarding service.

"BT was liberalised but not privatised at that stage. I do not think many of them are going to be liberalised yet. There is some softening, but the Bundespost in Germany, for instance, is still pretty rigid."

He suggests that the present mood in the EEC is that the electronics industry has no chance in Europe if the highways for data — that is telecommunications channels — are not liberalised — "this time you have the national governments

on the side of the EEC, from the Prime Ministers down, supporting the EEC initiatives."

Even when Europe's PTTs agree to work together, there is still the delicate issue of standards to be resolved and much behind-the-scenes haggling still takes place on numerous topics.

Mr Paul Shimmel, technical director of Microscope, a company which specialises in videotex equipment, comments: "Every PTT's new videotex Gateway is another system's roadblock."

Instead of providing the opportunity for all to receive the power and possibility of a new Lingua Franca in data communications, "we have seen the creation of a Tower of Babel," he says.

"I hope that within these systems we can take a planned and European attitude to our standards and compromise our positions to produce inter-networking standards that are both acceptable and, more importantly, practically implementable by all."

There are groups whose self-interests parallel this requirement — the private players, the multinational companies and the major computer companies, he believes.

"The groups who are working to some degree against this interest are the very members of the Consultative Committee for International Telephony and Telegraphy (CCITT) themselves, the PTTs, not because they are trying to be awkward

but because their own interests are each different and their decisions are purely taken on a national basis.

It must not be forgotten, says Mr Shimmel, that CEFT only defines the presentation layer of the terminal standard, does nothing for inter-networking, and at best, "will only serve to drive a further wedge into the inter-networking area."

"It should attempt to encourage, first conformity and then a staged evolution of standards that will meet the demands of a never evolving set of terminal standards," he adds.

The question now is whether the PTTs will be able to shake off their past and lead by example.



Electronics industry in Scotland: computer memory storage devices being assembled in the "clean room" at Rodime's plant at Glenrothes, Fife

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Manpower needs

CONTINUED FROM PAGE 4

— "only then will the status of engineering be lifted, attracting an increasing number of young people to enter the profession," he adds.

There are some promising signs, however. Just as national service in West Germany now provides a nursery for engineering training, so, too, can military service in Britain's armed forces. For example, Computer-aided Services, another maintenance company, has signed a contract with the UK Defence Ministry's Number Two Resettlement Centre at Aldershot to take part in the "Microprocessors and Microcomputers in Engineering" course, run by the centre.

Mr Bernard Pearcey, head of the centre's engineering department, comments: "We decided upon a third-party maintenance company because, after surveying the market, the service side is the part of the industry in which there is still much growth to come."

The first two weeks of the course will cover subjects such as basic transistor theory, number systems and codes, basic logic elements, memory addressing and de-coding the 6800 microprocessor and programming.

Courses are open to all ranks from private to general, providing they pass a pre-course assessment and have served a suitable length of time to be eligible for resettlement training.

In examining the question of electronics education in Europe, the situation in Ireland is of particular interest. An increasing number of international electronics groups are moving to Ireland for both expansion and for skilled staff.

Reports show that per 1,000 head of population, Ireland has twice as many electronics engineers as the UK, (a figure expected to be 3½ times by 1988). It also has twice as many computer science graduates per 1,000 head of population as the US.

But where should the educa-

tional change in attitude begin? as far as the UK is concerned, Mr Ian Thompson-Bell, a senior consultant with the advanced electronics group of BA Technology, suggests that the proper combination of correctly skilled engineers working in a stimulating, commercial, results-orientated environment is the only way to re-establish the UK, in particular, as leader in the development of new products.

He adds: "Those in universities and industry who are responsible for training and education facilities for new and established engineers need to answer two questions: Are we providing enough suitably-trained engineers? And are we using them effectively? I believe the answer is 'no' in both cases."

To answer the first question, he says there is a need to know what an engineer's knowledge requirements are in order to function effectively. Today's engineers need more than the detailed grounding in theory and analysis currently provided. They must be given a stronger grasp of design principles, provided in a practical way to make them more aware of real-world design problems.

The most powerful reasons for this approach are that engineers will spend their working lives designing products which should be manufacturable in volume, safe to use, reliable and profitable. Theory does not train them to achieve this.

Training engineers in this way will go some way towards ensuring they are used properly, he believes. But engineers also need to be given more commercial motivation. They need to be taught the significance of their work, their own cost and of timescales, an idea of the marketability of products upon which they are working and how they will be manufactured. To fail to provide this information leads to expensive, protracted developments of products which appear in the wrong market, at the wrong time—and the wrong price.

"In order to make the best of these changes, industry must then give its engineers true project responsibility," he says.



Electronics in Europe 4

Economic necessities bring a greater measure of collaboration between centres of academic research and the electronics industry

More university link-ups

Research projects

DAVID MARSH

THE GAP between the European electronics industry and academic researchers has grown more narrow as both sides see the benefits of a closer partnership.

"Universities show far more interest in collaboration than they did 10 years ago," comment Dr Nico Hazewindus, director of corporate product development at Philips, the Dutch electronics multinational.

Part of the reason for this change in approach is sheer economic necessity. As public funds for research have grown tighter in many European countries, university workers see more need to attract funds in the shape of sponsored research from companies to continue the operation of academic departments.

Motivation

For their part, companies have paid more attention to creating mechanisms to tap useful results from the academic world. The motivation for this is, first, that companies in electronics and computing find more and more that pure research done in universities in areas such as semiconductor materials, advanced programming and novel computer architectures (the arrangement of circuits inside a machine) is relevant to products that they want to take to the market place.

Second, the cost and complexity of much of today's computing research is such that only companies in the premier division of the world's electronics industry — these are

mainly American companies such as IBM, Xerox and AT&T — can afford the facilities to do the work themselves.

For those further down the league table — which means even the biggest European companies, such as Olivetti, GEC and Philips — the most practicable option is to turn for such pure research to the leading university laboratories and set up collaborative ventures.

ICL of Britain three years ago created University Research Council, funded with £500,000 a year, to cement contacts with leading computing departments in academia.

The cash has sponsored individual research projects and paid for a series of seminars at which academic people and ICL staff can discuss subjects of common interest.

By this mechanism, Mr Mike Watson, technical director of ICL, says his company has struck up useful links with universities such as Oxford, Cambridge, Manchester, Kent, Stirling and Edinburgh and London's Imperial College.

Such efforts do not always proceed entirely smoothly. Some leading academics in computing, at least in Britain, sometimes find it hard to disguise that they feel their own intellectual abilities are far above what the average researcher in industry has to offer.

For their part, the companies may become frustrated at what they see as the leisurely attitude to research shown by some university departments which is out of step with industry's more urgent requirements regarding the development of products.

These difficulties notwithstanding, the closer links between industry and academia are illustrated by the rash of moves all over Europe to set up science parks and innovation centres in which companies

(both established firms and fledgling enterprises perhaps started by academics themselves) can work alongside each other.

In West Germany alone, during the past year or so, about 50 towns or regions have set up or announced ventures of this kind, normally linked with an academic institute. West Berlin, for example, has a thriving innovation centre set up a little over a year ago in which small firms in areas such as computing, electronics and robotics operate in premises rented by the city's Technical University. Miroslaw, one of Germany's leading computer companies, has also decided to set up premises on the site.

Pioneers

In Britain, Newcastle University took a pioneering step six years ago in setting up the Microelectronics Applications Research Institute (MARi) which acts as a bridge between the university's computing department and the world of industry. MARi is an independent research organisation with four members — the university, Newcastle polytechnic, Tyne and Wear County Council, and CAP (the software company).

The institute has annual sales of £1.4m and frequently calls upon people from the university or polytechnic to act as consultants in projects that it undertakes for industry. MARi is probably best known for its marketing of a product originally developed at the university's computing department and sold as "the Newcastle connection". It is a software protocol, which, for example, is used in some Honeywell, Burroughs and ICL computers and which provides for interconnection between these machines and other items of hardware made by different manufacturers.

Dr Ken Gray, director of research at Britain's Thorn EMI, advances another reason for the

stronger coupling between companies and academic institutions — the fact that such links make it easier for the commercial organisations to employ talented people.

"...electronics scientists and engineers in short supply all over Europe, the average graduate in these disciplines can afford to pick and choose when it comes to taking a job. Those companies that have managed to form a strong relationship with the department in which the graduate has taken his degree will stand a better chance of persuading the most sought-after students to accept job offers."

"The future of Thorn EMI relies on us forming close relationships with universities which will enable us to recruit," says Dr Gray. "The life blood of high-technology companies is youth. Recruitment of new people is vital and it's very competitive."

This philosophy is one reason Thorn EMI has created the post of chief scientist, which will be filled this autumn by Professor Gareth Robert, an expert in thin-film molecular electronics who is currently at Durham University.

Prof Roberts will spend a day a week at a new laboratory that Thorn EMI is creating at Oxford University, which the company will sponsor with £500,000 over five years. The laboratory will investigate fundamental problems in physics and chemistry which could have relevance in the long term to Thorn EMI product development.

The British company already has a close connection with Newcastle University, with which it has worked on the design of a new generation of sensors based on microchips that can detect small quantities of gases and liquids in, for example, samples of blood or urine in medical applications.



British motor engineers research aspects of surface geometry of future cars at the design centre of Austin Rover

Boost for joint ventures

Industrial collaboration

PETER MARSH

COLLABORATION in research has become a vogue phrase in the European electronics industry in the past few years.

Led by the continent's big electronics companies such as GEC in Britain, Bull in France and West Germany's Siemens, the industry has realised that to stand a chance of competing against the U.S. and Japan it must pool some of its ideas in the research stage of the development of new products.

The most visible sign of this philosophy is the Esprit programme, a research project initiated by officials at the European Commission and taken up mostly with enthusiasm by industry leaders themselves.

Under the programme, which started last year, the European Commission is to hand out research grants totalling 750m European Currency Units (ECUs) (about £470m) to clubs of companies and academic institutes in the EEC's 10 nations.

The clubs, which must include at least two industrial partners from different countries — work together on what is called precompetitive research on the understanding that they

put into the projects summe and Science and Engineering Research Council, has £200m to spend on four areas of computing research: knowledge-based systems, techniques to make it easier for people to communicate with machines; software engineering and new chip-design and production methods.

Of the total cash (which under the plan is being added to by contributions from industry of £150m) about 80 per cent has been committed. The four technology areas emphasised by the Alvey project, in addition to being narrowly defined, miss out on one key area related to computing — telecommunications.

Companies and universities can also share out the use of very expensive instruments that may cost £1m or more used in analysis or prototype production. An individual laboratory might find it difficult to justify the purchase of such hardware for its own use solely.

The big question marks about the collaborative research schemes concern their lack of direct relevance to the areas everyone agrees are the most vital for Europe's electronics companies — product development and marketing.

The general hope is that based on the rapport which companies and individual scientists strike up during the research phase, alliances will become established to tackle the equally difficult and, ultimately, vital areas regarding the sales of products in the world market.

"Precompetitive research can be defined simply as anything that companies choose to collaborate on," says Mr Mike Watson, technical director of ICL. "There is no way that we are going to spend that money (the cash ICL has put into Esprit) unless we think we will get something out of it. In most projects, the understanding is that one of the possible options after the precompetitive work is joint development."

"The evolution from research to product development may, in some cases, be impeded by alliances — in the marketing, not research, area — that companies have already formed with non-European partners. For instance, Philips has an agreement in telecommunications exchanges with AT & T of the U.S."

Any discussions by Olivetti about joint development of research ideas that come out of Esprit may be torpedoed by the 25 per cent stake the same American company is due to take in it over the next few years.

Philips and Siemens began two years ago to swap information in areas of pure research such as chemistry, physics and electronics design. The collaboration recently branched out with the start of a joint project between the two companies to develop by 1990 a set of new microchips containing up to 4m circuit elements and one piece of semiconductor using novel techniques in very large scale integration.

In telecommunications, CIT Alcatel of France, Siemens, Plessey and Italtel of Italy have collaborated in research targeted at new exchanges and transmission techniques.

The positive aspects of the new collaborative arrangements chiefly concern the extra options that companies are given by pooling ideas.

GEC, for instance, is working under an Esprit project with Thomson and Siemens on new techniques connected with the metallisation processes in the final stages of the manufacture of microchips.

Under the programme, separate sets of researchers look at different areas of research and compare notes as they go along. It's a way of taking a more exhaustive view of the possibilities," says Dr Cyril Hilsum, GEC's chief scientist. "You are effectively a much larger research group working on projects bigger than an individual company could cope with."

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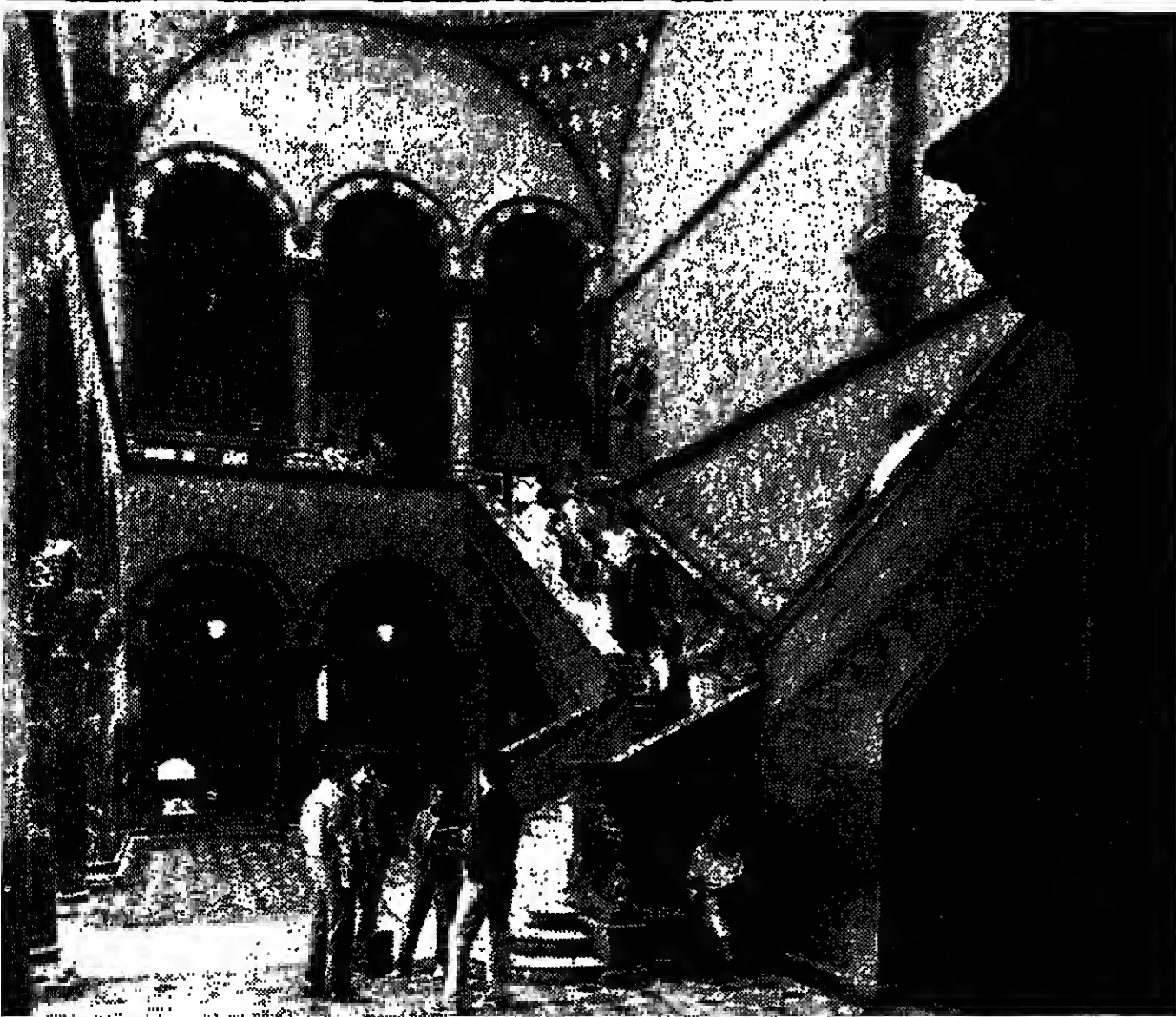
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"WE'RE THE
YOUNG EUROPEANS."

Education and training

KEVIN TOWNSEND

EDUCATION is the foundation upon which Europe's social structures are built. In Britain, many have traditionally believed in education for education's sake.

In contrast to other countries in Europe, the attitude in the UK towards business, commerce and industry is often that it is a necessary evil.

The British Government, amid a chorus of protest from some educational institutions, is seeking to change this. It seeks to link industry to education. Critics claim it is just another way of arguing for cuts: the effect, however, will be to give industry a greater say in the subjects taught at schools and colleges.

Eventually, national necessity, rather than social status, will dictate the syllabus. But this does not solve the basic problem of today, caused by an underlying social stigma against the engineer.

It would not be correct, however, to suggest that continental Europe is a haven for engineers. Mr Bill Moir, engineering director of the computer maintenance company, SMS International, comments: "The attitude towards electronics engineering as a profession is hampered by social stigma. It is undoubtedly true that the UK and French societies do not look favourably upon engineering as a desirable profession. Teenagers are steered towards traditional professions, such as law and accountancy, where a clean, superior image prevails."

"West Germany does not have the same outlook. The social status of electronics engineers is on a par with other professions, and engineering qualifications are as greatly valued," he says.

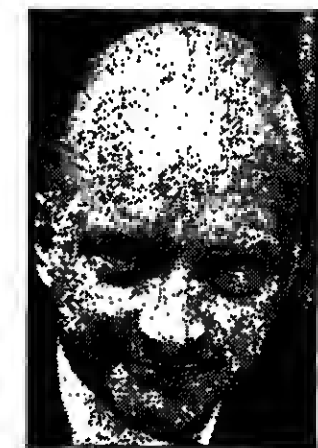
Belgium has a similarly healthy attitude towards its engineers.

Dr David Boyes, an engineering manager with PA Technology in Belgium, comments: "Engineering education in continental Europe attracts the best people at all levels and technically, has tremendously successful results."

As a result, post-college, on-the-job training is the best there is — a long responsible work.

"What we do not see — and this is true for most Europeans — is the materialism, business sense, call it what you want, which characterises the U.S. and Japan."

"If we can get that into at least the engineers, then the future looks good. One method might be to give engineers more



Mr Geoffrey Pattle, Britain's Industry and Information Technology Minister: encouraging closer links between electronics industries and education

business exposure earlier in their careers."

Attitudes
Mr Moir believes that the narrow attitude towards engineering stems back to the classroom. Although microcomputers are being used increasingly in schools, thus alerting children's awareness of technology, the emphasis is placed on operation, not assembly.

French students, in particular, who show an aptitude towards engineering in secondary schools, have little available in further education to train them to required standards.

The National Institute Economic Review claims that an important reason for West Germany's lead over the UK is that German schools give a better foundation for work-skills training to most children.

German technical colleges are widely respected and thus attract students of high calibre. The country's National Service system also provides experience in guided weapons, which, in turn, gives certain young people some good grounding for computer engineering. The French and British Governments could well look to the West German Government which has encouraged close collaboration between the academic and electronics sectors, suggests Mr Moir.

"The Government must play a more active role in encouraging the exchange of views between schools, colleges and employers," he concludes.

Greater incentives are also needed to encourage both external and internal training organisations to be established

Continued on next page

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Some of the glamour is wearing off

Britain
JASON CRISP

BRITAIN'S ELECTRONICS companies are having to learn to ride the roller-coaster of City opinion. After a period of glamour and bullish enthusiasm, the electronics sector is now in the dog-house.

Problems and disappointing results from the major companies like Plessey, STC, Thorn EMI and Racal have been behind the disenchantment. Adding to the general sense of gloom has been a number of crises at some of the once high-flying new microelectronics groups such as Sinclair Research and Acorn Computers.

Microfocus, a glamorous fast growing software company, suffered most from the adverse swing in sentiment. It saw its share price more than halved—from 740p to 300p—in a single day after reporting lower profits following problems in the U.S. market.

Key factors

There are a number of themes which underlie the weakness of the sector which do not apply to all the companies, but nor do many escape from one or more.

● The depth of the slump in semiconductors which has hit companies worldwide. Although semiconductor production by UK companies is comparatively low and largely confined to specialist niches, most of the major companies are affected.

For example, Immos, owned by Thorn EMI, a mainstream semiconductor producer, has laid-off staff in the U.S. and is working short-time in Britain. This is the norm for non-Japanese semiconductor companies. Last month, National Semiconductor announced worldwide lay-offs including some in Scotland. Other British companies with semiconductor

production are Plessey, STC, Ferranti and GEC.

● Cancelled or delayed orders for military communications by the Middle Eastern oil-producing countries has hit companies such as Plessey, Racal and STC.

● A tougher, more cost-effective purchasing policy by Britain's Ministry of Defence which will affect Plessey, Racal, GEC and Ferranti.

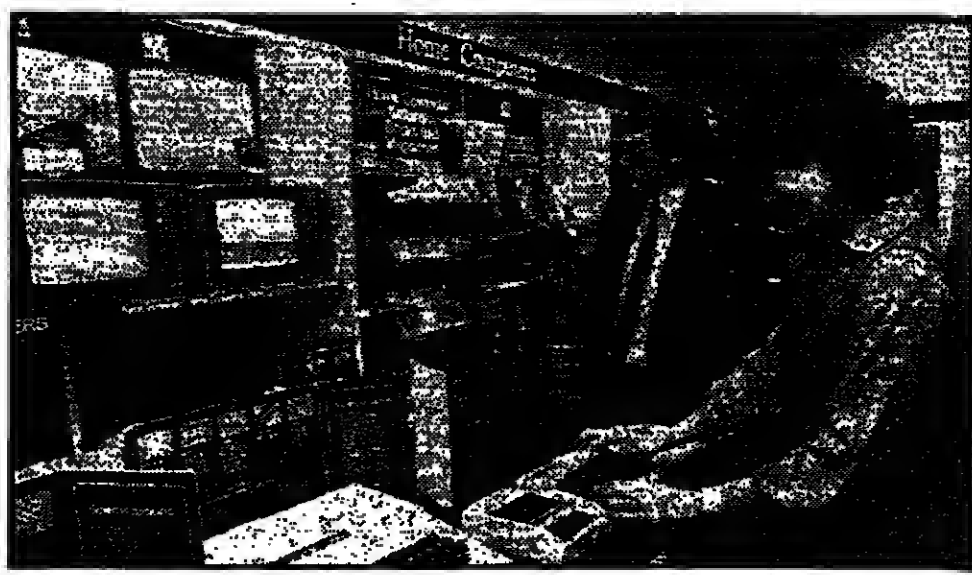
● A growing uncertainty in the telecommunications business as a result of liberalisation and the privatisation of British Telecom.

BT's behaviour since flotation has undoubtedly adversely affected the share prices of companies like Plessey and STC. The two main events this year have been BT's proposed acquisition of 51 per cent of Mtel the Canadian telecommunications manufacturer and the ordering of public exchanges from LM Ericsson.

The main concern about the Mtel deal is that BT will buy an increasing proportion of its private exchanges from the Canadian company at the expense of Plessey and GEC. The acquisition also places a question mark over Mtel's relationship with ICL, part of STC, which is the main UK distributor of its new and powerful exchange the SX2000.

While BT's intention to buy a second digital public exchange system was widely known the fact that it placed an order with Thorn-Ericsson, a joint venture between Thorn EMI and LM Ericsson of Sweden, did not help sentiment. The assumption is that STC will not win further orders for TXE4A exchanges, the old equipment currently being installed, and that STC and GEC may not receive as many orders as they hoped for. But System X, the new digital exchange, is the norm for non-Japanese semiconductor companies. Last month, National Semiconductor announced worldwide lay-offs including some in Scotland. Other British companies with semiconductor

production are Plessey, STC, Ferranti and GEC. ● The collapse of the home computer market: British companies have flourished in the home computer business until



the beginning of this year. Acorn and Sinclair Research were seen as two of the country's most successful and dynamic entrepreneurial success stories. In the space of five years they reached annual turnovers of around £100m.

This year both have been in deep trouble. Although both have suffered from the weakness of the UK market they have also suffered a number of management problems. Both ended the peak Christmas selling period with over £30m of stocks, enough to last them through to the following autumn. Both hit cash flow problems and had to defer payments to their creditors.

Olivetti rescued Acorn in February, buying a 49.3 per cent stake for £10.4m. But Acorn is still struggling as sales this spring have been significantly lower than last year and as a result the company has been hit by renewed cash flow problems. Acorn's further difficulties coinciding with the similar crisis at Sinclair Research has added to the disenchantment.

Headaches

The problems at the leading home computer suppliers have also caused headaches for their suppliers. Both A.B. Electronics and Thorn EMI have had to accept deferred payments.

● The weakness in the business personal computer market. Applied Computer Techniques, the Birmingham based company which makes the Apricot, has to some extent been tarred with the same brush as Sinclair and Acorn. But ACT's management and products differ greatly from both.

However, ACT's reputation has also been affected by its attempt to break into the potentially lucrative U.S. market through Apricot Inc, a \$20m company in which it holds a 20 per cent stake.

The U.S. personal computer market is particularly flat at present. In addition many well-established U.S. companies have failed to succeed in this market. The early signs are that Apricot Inc is facing a tough time in the U.S.

● The weakening of the previously strong consumer electronics markets. Companies like Thorn EMI have been hit by a fall in demand for items like video cassette recorders after enjoying an unprecedented three year boom. Sales of VCRs in the UK fell from around 2.2m units in 1983 to below 1.5m last year.

Nevertheless, demand for colour TVs remained remarkably strong last year with deliveries to the trade reaching a record 3.56m sets. However, Thorn EMI was hit by the rapid swing to small-screen sets and was left with excess stocks of large TVs.

There is no sign of any immediate relief in any of the various problem areas which are hitting the UK electronics industry. Behind all the immediate problems there is a growing concern about the fundamental and long term difficulties. These range from availability of skilled staff to ability of British companies to compete, on a world scale.

And earlier this year Cambridge Econometrics predicted that Britain's trade deficit in electronic and electrical engineering products would reach \$8.3bn by 1985, more than three times the £2.6bn deficit last year.

Britain is certainly not alone in Europe with its problems in the electronics industry. In many ways, the UK is better off than other countries, not least because it has a thriving entrepreneurial sector in electronics which is expected to thrive in spite of the problems.

● After three good years, the UK home computer market is now weak

European semiconductor shipments

● Figures for 1984 by suppliers in \$m

Philips (incl. Signetics)	\$546
Texas Instruments	\$525
Motorola	\$384
Siemens	\$289
National Semiconductor	\$240
Intel	\$225
NEC	\$220
Hitachi	\$210
Thomson	\$210
SGS	\$180

● European top-ten: 4 European; 4 U.S.; 2 Japanese

● World-wide top-ten: 1 European (Philips/Signetics); 5 U.S. (TI, Motorola, National, Intel, AMD); 4 Japanese (Hitachi, NEC, Toshiba, Fujitsu)

Source: Osaquest.

Top European producers

● Semiconductor memory revenues for 1982-84 in \$m

	1982	1983	1984
Immos	150	157	
Siemens	50	72	
Thomson	47	63	
Intel	31	19	
SGS	25	67	
Matra-Harris	19	90	
Total	322	528	

Top 5, U.S. 1,959 52

Top 5, Japan 2,632 93

Top 10, worldwide 4,791 74

Source: Osaquest.

Fresh mood of realism among manufacturers

THE FRENCH electronics industry is facing up to the future with slightly less self-confidence than in the buoyant days of 1981-82—but with a great deal more realism about the need for international collaboration to survive in an increasingly competitive world.

The euphoria generated after the election of Socialist government in 1981—which brought in a wide-ranging nationalisation programme including the country's top electronics groups—has now faded.

With the main nationalised groups in this sector—Compagnie Générale de l'Electricité, Thomson and Bull—all cutting employment in order to boost competitiveness, the Government's earlier visions of creating 200,000 new jobs in electronics the end of the decade are now no more than a memory.

Instead, an increasingly tough-minded policy has emerged of seeking business prospects abroad. The preoccupation is particularly acute in telecommunications, where French companies are no longer receiving the domestic orders generated by France's dash into digital exchanges from the mid-1970s onwards.

The professional and defence electronics sector has also seen the importance of foreign orders increase as a result of the sluggish domestic economy and cuts in France's own defence budget.

Thomson's financial future has been practically salvaged single-handedly by the FFR 35 to FFR 40bn air defence deal from Saudi Arabia, won by a Thomson-led consortium last year. And international sales of aircraft and defence equipment are proving of increasing value to France's "club" of high-performing aerospace electronics groups.

Big government-engineered electronics projects still have their place. For example, the Minitel home videotex system, pioneered and financed by the Posts and Telecommunications Ministry, is now in operation to the tune of about 700,000 terminals, with the number planned to double next year as the service is spread around the country.

France's prowess in videotex—with 1,000 different services in operation, it claims the world lead in this field—has benefited not only the terminal manufacturers but also software

companies (led by Cap Gemini Sogefi and Sesa for the Minitel). And it is giving France good opportunities for winning export orders, with the PTT's computer services subsidiary Telesystems chalking up initial contracts in the U.S. and Japan in recent months.

France's 20-year-long commitment to space is also paying off in terms of equipment orders connected with the Ariane space rocket and satellites. France is in the middle of an exciting period of launching its own domestic Telecom telecommunications spacecraft as well as, over the next year, the Spot satellite for earth observation and TDF-1 for direct television.

Another in the plethora of communications technology projects is an ambitious pro-

gramme to wire up France with optical fibres by the end of the century—although early orders have not kept up with levels expected when the project was announced in 1982.

Developments in France

DAVID MARSH

CGE, the most consistently profitable of all the big groups nationalised in 1982, made group profits of FFR 797m in 1984 after FFR 636m in 1983. Earnings at its telecommunications subsidiary CIT Alcatel fell only slightly in spite of difficulties over stagnating domestic and foreign orders.

CGE will be incorporating into its accounts from this year the results from Thomson-Telecommunications, the loss making holding company set up to pool Thomson's civil telecommunications interests after the CGE/Thomson asset swap agreed in autumn 1983.

In spite of improving results, the nationalised groups remain a drain on increasingly scarce budgetary funds. Thomson, Bull and CGCT, the former subsidiary of ITT of the U.S., will be receiving FFR 2.75bn of public funds this year, down only slightly from 1984.

France is very much playing the European card in efforts to propel international co-operation. CIT Alcatel, after being rebuffed in efforts to win a share of future British Telecom orders, has joined forces with Plessey, Siemens, and Italtel over research into new generation digital exchanges.

Great hopes for the future are set on the joint research centre on artificial intelligence set up by Bull, ICL and Siemens. France hopes its newly proposed Eureka programme will provide further opportunities for co-operation in areas like high-powered computers and software.

According to the Consumer Electronics Manufacturers Association, exports of audio and video equipment last year rose 38 per cent to FFR 2.7bn—although imports (up 13 per cent) were still more than three times as large at FFR 9.2bn. In the professional electronics sector, where France has traditionally enjoyed a far more healthy trade position, exports last year rose 9 per cent, with orders tripling thanks partly to the overall boom in defence-related design in priorities away from national grand designs towards down-to-earth economics has been reflected in renewed interest in backing small companies in the electronics sector—and also in a spirit of investor interest in high technology companies on

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Expert systems are perhaps the most exciting of the "new generation" software products designed to exploit the power of today's low-cost computer hardware. They compile a computer memory stuffed full of facts gleaned from the experience of a set of recognised experts and a set of rules derived from research in artificial intelligence.

The software makes it easy for users to interrogate the information stored in the computer's memory and get the benefit of the hundreds of man-years of experience stored there.

Expert systems are believed to have massive potential in a wide range of human activities from foreign exchange dealing to car repair, so Professor Michie should have been on to a good thing.

He set up a company Expert Software International in Edinburgh and offered Expert-Ease at £2,000 a copy. He sold around 100 copies in two years which simply was not enough to prevent the company going to the wall.

Professor Michie then licensed Expert-Ease to an aggressive Californian company, Human Edge Software, which repackaged it and offered it at \$695. It sold 100 copies in the first week.

Expert-Ease is again available in the UK through Thorn-EMI Computer Software which markets it (at £695) along with other software from the Human Edge range. According to Mr John Forrest of Thorn-EMI, it is doing quite well selling chiefly to customers anxious to experiment with expert systems.

This story encapsulates the difficulties facing the European software industry.

There has never been a shortage of high quality ideas. Indeed, some of the most important principles of good software design are of European

origin. The new U.S. Department of Defence programming language Ada was developed at MIT Honeywell Bull by an international team under the leadership of the Frenchman Jean D. Ichbiah.

Microprogramming, a software concept which imparts to a computer a whole repertoire of abilities not included in its hardware specification, was the brainchild of Professor Maurice Wilkes of Cambridge University.

And Pascal, the innovative programming language on which Ada is based was devised by the Swiss mathematician Nicholas Wirth.

But despite the fact that the ideas are there and that European computer programming is generally first class, the fact remains that an overwhelming percentage of the software used in Europe is American in origin—and the percentage is increasing.

By contrast, there are only a handful of European products which have made any impact in the U.S. Because the language of computing is English, it is not surprising that most are British in origin.

Shadow II, a telecommunications monitor (communications controller) written at Thomas Cook and marketed by the ill-fated company Altergo had some success when IBM's own telecommunications software was less effective.

Business Intelligence Services has sold its Midas banking package steadily throughout the world over the past seven or eight years and Software AG of West Germany has been successful with database software.

The UK company Microfocus has had success in the U.S. with a version of Cobol, the most common business computer programming language, which runs on microcomputers.

But this trickle of successful products hardly bears sensible comparison with the weight of U.S.-written software which dominates computing worldwide at every level—even the most popular games software is usually a copy of an American original.

Most software industry experts agree the problem is the fact that there is not a mass market for software in Europe comparable to that in the U.S.

UK companies tend to sell software written for the UK to UK companies; French software houses sell programs tailored to French market conditions to French companies; West German



Mr Peter Bonfield, ICL's managing director, emphasises that Unix is a major opportunity for European software companies

software houses sell into the West German market; and so on.

U.S. companies, if they have a successful product at home, have secure financial and customer bases from which to launch attacks on Europe as a whole.

Very few European computing services companies—even the giants like CAP-Sogeti, Gemini, Thorn, EMI, or CIB—seem to be able to generate revenues from software sales sufficient to pour finance back into the business in the manner of the U.S. leaders.

And the cost of success is growing yearly, especially in microcomputer software where advertising and marketing is all-important.

So there is much hope for the European industry in world markets.

Most analysts are doubtful that the tide can be turned although all agree that there will always be niches where a bright company with a good idea can make money.

There is always the possibility of the emergence of a new standard which would allow all the players to start at something approximating equality.

The magic word in Europe at the moment is Unix, software

developed over a decade ago by AT & T's Bell Laboratories to control high-powered mini-computers and simplify the job of programming them.

Now that microcomputers have the sheer raw power and storage capacity to run Unix, it is being increasingly seen as a way out of the stranglehold exerted by the big computer manufacturers on the software world.

Speaking at the European Computer Services Association conference in Dublin only weeks ago, Mr Peter Bonfield, managing director of ICL, the UK-based mainframe manufacturer now a subsidiary of STC, said that Unix represented a major opportunity for European software companies.

He said: "Unix is without doubt the key to the future and a major opportunity for the industry in Europe. It should help rapidly to create the pool of applications users want and let them pick and choose. Genuine multi-vendor choice is the end result. It will also help with the sharper identification of profitable market segments."

It is perhaps significant that just as there is massive enthusiasm for Unix among the European manufacturers, interest in the U.S. among software suppliers is lukewarm or non-existent.

One further opportunity, identified by Mr Peter Bonfield, is the consultancy input, at the same conference, depends on what seems to be a sea change in the U.S. market place.

For some years now, the trend has been to low-cost, off the shelf software packages instead of expensive custom-written software.

It seems that much of this software has remained unused because buyers found it too difficult or too time-consuming to learn.

So the trend now seems to be towards service and product combined, using computer technology to provide help for the troubled user.

He or she could simply telephone for help. The company, using communications technology and perhaps even expert systems could diagnose the trouble and advise on how to solve the problem.

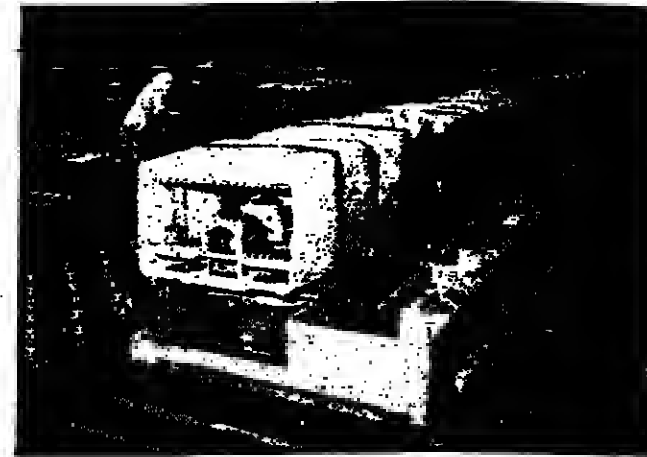
Dr Douglas Eyles, Director General of the UK Computing Services Association comments: "There is a good chance for European companies if they return to what they are best at—providing a service."

Western European computing services vendors

(worldwide revenues—1984—\$m)

	Revenue outside Europe	Western European revenue	Worldwide revenue
CAP Gemini Sogeti	46.3	126.2	172.5
Thorn EMI	36.5	68.1	104.6
CISI	34.0	138.7	172.7
Seicom Int'l	32.4	105.8	138.2
Sema	30.6	84.6	115.2
SESA	18.5	63.2	81.7
Micro Focus	16.1	4.5	20.6
SG2	15.0	135.6	150.6
Sodetec-Tal	14.3	16.8	31.1
Logica	9.4	39.6	49.0
CISI	8.4	100.8	109.2
CAP Group	8.3	27.9	36.2
BTN	6.9	32.4	39.3
SDN	5.9	33.6	39.5
BIS	5.5	14.3	20.1

* Includes Datasolve and Software Sciences.
† Includes SC division in the U.S.
Source: International Data Corporation.



Advanced visual display terminals on manufacturing assembly line at IBM's Greenock, Scotland, plant

Uneasy compromises mark IBM relations with European governments

Europeans take a wary view

IBM strategy

ALAN CANE

IBM likes to think of itself as the well-intentioned saviour in Europe, anxious to play down its foreign origins and take a full role in its adopted family.

It is hurt and bemused when European governments treat it with fear and suspicion as if it were the neighbourhood rapist.

For their part, European governments have a schizophrenic attitude to the world's largest computer company. They are well aware of, and worried by, its political influence and market power, but they cannot ignore its contribution to investment and economic growth in their countries.

So their response to its various initiatives is often an uncomfortable compromise. IBM believed, for example, that it should play a part in Esprit, the European Strategic Programme on Research and Technology, sponsored by the EEC and involving collaboration between many of Europe's major electronics companies including Siemens AG, ICL of the UK and Groupe Bull of France.

The programme has been designed to strengthen Europe's position in advanced computing to counter the threat posed by Japan's own initiative, the "Fifth Generation" computer project.

IBM's keenness to participate was viewed with alarm by Groupe Bull, trading at a loss and reeling from IBM's effective drive into the French computer market.

It tried to persuade the French Government to oppose IBM's participation, but it was unsuccessful. IBM is one of

France's largest taxpayers and the Government was unwilling to offend such a sound source of revenue.

But IBM does not have things its own way all the time. In the UK, it was rebuffed when it proposed, in collaboration with British Telecom, the establishment of a "value added network service" running over BT's telephone lines and controlled by IBM computers.

Value added network services are one of the most important new forms of service which the convergence of computing and telecommunications are making possible.

They comprise virtually any telephone lines other than the service which operates over straightforward carriage of voice telephone messages. Electronic mail is a VANS, for example.

IBM and BT were proposing to set up a general purpose service; the opposition howled that the combination of two such powerful organisations would create a de facto monopoly before the VANS business had really taken off, killing off the competition at birth.

The Government agreed and rejected the joint proposal in October last year.

How important is Europe to IBM? It accounted for 26 per cent of its revenues last year and its market share for its various systems compare well with U.S. figures.

For many years, IBM has dominated the world market for commercial mainframe computers—sometimes getting close to a 70 per cent market share. It is beginning to repeat this performance in minicomputers and in personal computers.

In 1984, according to the Paris-based company Intelligent Electronics, it took 29.6 per cent of the European personal computer market, ahead of

Apple with 16.5 per cent and Olivetti with 7.9 per cent.

The only European companies to make any impression at all on the domination of the Americans were Olivetti and ACT of the UK.

Intelligent Electronics noted: "IBM, although in a strong leading position in the UK market found a worthy competitor in ACT. Its strengths in the larger corporations, however, outweighed any local producer advantage that ACT enjoyed."

UK share

IBM has probably achieved in the UK its highest share of direct sales and has converted to the Personal Computer a vast number of large corporations including the banks. This strength added to the large sales volume which some of their bigger dealers achieved confirmed their strong hold over this market.

Against an IBM freed from the U.S. Justice Department's antitrust suit in 1982 and the EEC's similar action last summer, European computer manufacturers and telecommunications companies have had little choice but to seek protection in strategic alliances and common standards.

Part of the concern over IBM's joint VANS proposal with BT was based on a fear that the company would use its proprietary networking technique Systems Network Architecture (SNA) to engineer the system.

This, other manufacturers claimed, would put them at a disadvantage in attempting to connect their equipment to an IBM network.

Their hopes are based, therefore, in a world standard for computer communications called Open Systems Interconnect or OSI. It is a set of rules which defines precisely how one com-

puter systems should be connected to another if they are to pass information efficiently between themselves.

Unfortunately for the European manufacturers (and others including IBM itself) which are backing this OSI standard, the mills of the standards setting bodies grind so exceedingly slow that it will be some years before all the various definitions involved in the standard are fully defined.

In the meantime, European companies anxious to link their computers are copying their U.S. counterparts and settling, willingly or unwillingly, for SNA—what can't wait any longer for OSI? one data processing manager said.

So worried are governments and companies about SNA when IBM and British Telecom set to work to build the pilot of a cashless shopping system (electronic funds transfer at the point of sale or EFT/POS) for the UK clearing banks, they employed a "policeman"—CAP, leading UK computing services company, to ensure that IBM played by the rules in building the computer systems to run the network.

Such uneasy compromises seem certain to mark IBM's continuing relationship with Europe. It finds it difficult to establish joint ventures there, unlike other parts of the world and it finds it hard to be accepted wholeheartedly as the good European it claims to be.

The fact remains that European governments will continue to suppress IBM, albeit with a long spoon. As Stephen McClellan points out in his book *The Coming Computer Industry Shake Out*, "In the world of computers, as in horse racing, there is no such thing as a sure thing."

"But IBM is as close as we are going to get." And Europe knows it.

Risk-taking now less popular

WESTERN EUROPEAN governments are increasingly recognising the importance of venture capital in fostering the growth of young electronics companies.

They have taken their cue from the U.S., where an estimated \$3.5bn to \$4bn is invested annually by a venture capital industry which has produced world successes like Wang Laboratories, Apple Computer and Hewlett-Packard.

Their efforts, backed up by the independent growth of private venture capital institutions, have gone a long way to releasing the risk capital that high technology start-up companies so badly need. Yet there is still a widespread shortage of experienced executives prepared to leave safe jobs with large corporations and take a hand in running Europe's fledgling electronics ventures.

That concern was echoed by Mr Robert Ceurovorst, secretary general of the European Venture Capital Association, when he told a conference earlier this year, that there was still more risk equity available than suitable projects in which to put it.

He estimated that the pool of private venture capital in the European Community had multiplied by up to three times since 1983, when Europe's venture capital groups had raised \$1.6bn, of which just \$174m was invested.

"The social safety net in Europe has created an environment where risk-taking is no longer unattractive," he said.

The signs are that the attitude is changing. In Britain, for example, the British Venture Capital Association reported that in 1984, 32 per cent increase in 1983, according to a survey by the UK Venture Capital Journal.

To put that into perspective, however, computer and electronics-related concerns accounted for 27 per cent of the 729 companies to receive backing from UK venture capitalists in 1984, down sharply from 38 per cent of the 578 groups to find venture backing in the previous year.

Consumer-related concerns, however, jumped from 19 per cent to 21 per cent of the total.

The trend away from investing in high technology is even more marked among Business Expansion Scheme funds. The BES, launched in the 1983

that venture capital hackers might find it less easy to realise flotation profits from such concerns in the future.

Meanwhile, the trading problems experienced by companies such as Acorn Computers, Sinclair and Dragon Data have emphasised how quickly a once exciting investment can turn sour.

This does not make it any easier for European Governments to promote venture capital investment in the sector.

The Centre-Right coalition—which has produced a scheme currently being debated in parliament to channel more equity to small and medium-sized businesses—to Specialist France, which recently added legislation to stimulate venture capital to its existing battery of support schemes.

In the Netherlands, the establishment of a government-guaranteed investment scheme in 1981 has pulled in some £178m (£17.7m) for 109 companies, expected to rise to £112m this year. Like the BES in the UK, the scheme has played an important part in promoting the Dutch venture capital industry as a whole, which accountants Peat Mar-

shall estimate is about half the size of the UK industry in terms of the amount of money invested, but twice as large as that of any other Continental country.

Meanwhile, investment in unquoted companies. In all sectors has been stimulated by the success of secondary stock markets, led by the establishment of London's Unlisted Securities Market in November 1980 and equivalents in the Netherlands and France. They have provided valuable sources of development finance, but above all opened up a route whereby private venture capital investors can realise their profits by selling shares to the public—barring any swings of sentiment against the electronics sector, like that currently being experienced on the USM.

Public flotation of venture-backed companies are, as yet, rare, but recent UK examples include Sarasota Technology, and the Intem and DPCE computer groups, all of which brought substantial realisation

profits for their investors before their sector fell from favour.

European-wide attempts to stimulate venture capital for electronics companies have, however, met with less success.

A European Commission proposal for a 100m Ecu (560m) European Innovation Loan to assist small high technology companies (though not strictly venture capital in the sense that no equity was on offer) failed to win enough support to get off the ground last year.

The UK, in particular, argued that it was inappropriate to channel Community funds into the venture capital industry. The Commission would have matched contributions from approved funds and companies on a 1:1 basis.

The Commission's scheme has been shelved indefinitely, but the idea behind it—to encourage joint ventures and exchanges of technology between small companies in different European states—still lives on, in a watered-down form. The Commission is funding a pilot study for a European venture capital fund, conducted by Granville, the London-based licensed securities dealer.

The fund, to be called Euro-tech Venture Capital, is expected to be formed towards the end of this year, if all goes to plan, with about £10m of private money available for investment in advanced manufacturing technology.

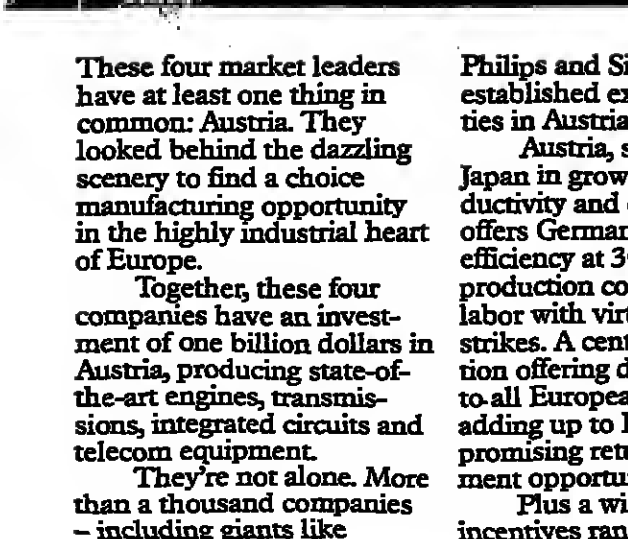
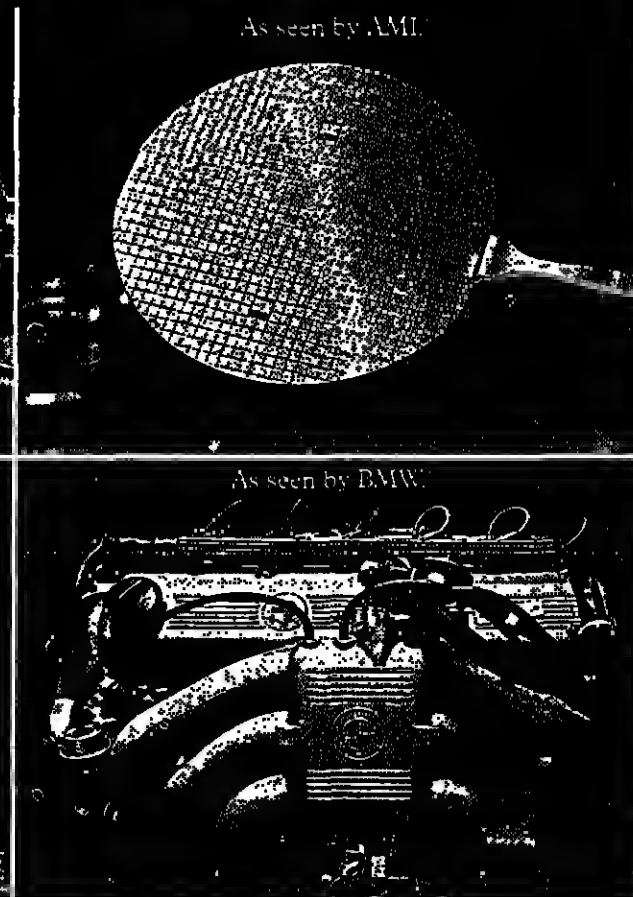
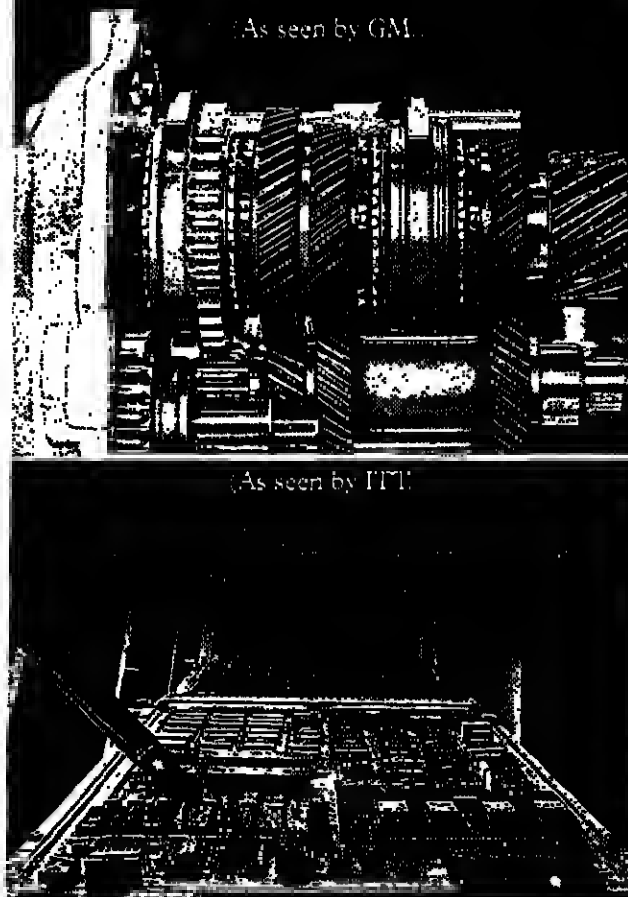
Finance comparisons by sector

Average size of financing (column A) and average number of investors per financing (column B) for the UK by industry sector for 1981-84

Industry	A (£000)	B
Computer hardware and systems	610	1.62
Software and services	436	1.47
Other electronics	662	1.61
Communications	520	1.85
Genetic engineering	1,133	3.11
Medical/health	865	1.80
Energy	739	1.52
Industrial products	526	1.47

Source: Peat Marwick.

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Electronics in Europe 8

A determined bid to make up lost ground

West German manufacturers

JOHN DAVIES
reports from Frankfurt

THE ELECTRONICS business is not for the faint-hearted. The speed of development, the risk and the costs can all be breathtaking. This makes the business all the more of a challenge in a country such as West Germany where, with some notable exceptions, conservatism and caution prevail.

Having fallen behind in electronics, the West Germans have launched a determined bid to catch up with the Americans and Japanese. Government and industry are trying to force the pace of research and to speed up the commercial application of electronics.

But the nature of the effort and some of the problems involved are highlighted by current preoccupations of Siemens, the country's largest private enterprise employer.

On the one hand, Siemens is pressing ahead with plans to produce more advanced semiconductor devices and is readily increasing its investment spending on the project. However, it has been preparing for short-term working at its newly expanded factory at Villach in Austria, because of the current state of the notoriously roller-coaster market for components.

Moving with speed and determination that have surprised many people inside and outside the company, Siemens is well on schedule with its plans for a new semiconductor plant at Regensburg in Bavaria.

Production, due to start in 1987, is to include one-megabit dynamic random access memory chips capable of storing more than 1m bits of data.

Siemens is only too aware that it is likely to be behind the Japanese in bringing such chips to the market. But it hopes to narrow the competitive gap when it begins production of a four-megabit chip at Regensburg in 1989.

With renewed emphasis on European co-operation, Siemens is working closely with Philips of the Netherlands in development work for the so-called "megaproject." Both companies are receiving substantial aid

from their respective governments. To boost its research in this area, Siemens is extending its development centre at Munich.

Siemens originally spoke of investment of well over DM 1bn on its megaproject, but has since revised its spending upwards. Only a few months ago, the whole project was estimated to cost Siemens DM 2.2bn, consisting of DM 1.4bn on investment and DM 800m on research. But investment now is put at DM 1.7bn and the total cost at DM 2.5bn.

The Regensburg plant was originally expected to cost DM 330m. But at a recent ceremony on the construction site, a Siemens executive said the company in fact would spend as much as DM 540m on it.

Strategy

Under Dr Karl-Heinz Kaske as its chief executive, Siemens has embarked on the megaproject as part of a strategy of focusing on growth-oriented business for the next decade. It has singled out such areas as office electronics, public communications networks and factory automation as major growth areas. It aims to be independent of outside suppliers for the advanced semiconductor devices required as building blocks in the development of major new products.

But the risks associated with Siemens' ambitions should not be underestimated. The financial outlay on major electronics projects is necessarily high, and the time available to exploit

them is relatively short, before they are overtaken by new developments.

Current market problems—in line with the upsets in semiconductor and computer markets in the U.S.—are generally viewed as short-term. It is ironic, however, that Siemens' plant at Villach in Austria has been preparing for short-time working by more than 500 of its 1,400 employees.

While short-time working is envisaged initially for about three months, it might extend to the end of the year. Villach was expanded recently at a cost of DM 214m and series production of 256-k chips got underway around the beginning of the year. Until then, Siemens had been producing 64-k chips.

In its electronics components business, Siemens depends not only on its own in-house market but to a large extent on outside markets.

Overall, the company's electronic components division supplies three-quarters of all its production to the open market and the remaining quarter to its own operations. Even for in-house marketing, the company wants to avoid being a "protected mature reserve" for its electronic components division and aims at competitiveness with outside suppliers.

The West German resolve to catch up in electronics has been spurred along by the Federal Government, particularly by Dr Helmut Schmidt, the Science and Technology Minister.

The Government has brought in a programme to spend DM 2.9bn on research aid for



Olivetti is now the foremost European-controlled maker of data-processing equipment. Above: M20 computers on the assembly line at Olivetti's Scarmagno plant at Ivrea.

information technology between 1984 and 1988. This includes DM400m for sub-micro semiconductor research, but Siemens says it is not yet clear exactly how much it will get from this sum.

The Government has also been trying to encourage the use of electronics in traditional industry, including the many small and medium-sized businesses that abound in West Germany. There is evidence that mechanical engineering and other industries are responding to this challenge and laying the groundwork for stronger international competitiveness.

Among motor vehicle manufacturers and automotive component suppliers, electronics operations have been developing strongly. There is considerable interest in such techniques as electronic direction finders, the so-called FVA project being developed by Blaupunkt with federal government support.

The consequences of lagging behind in electronics are only too clear from the consumer electronics industry. Faced with powerful Japanese competition, Grundig has come under the management control of Philips and faces further re-

structuring and job losses to ensure its survival. Telefunken, now in the hands of Thomson of France, is currently battling with the West German cartel authorities for the right to continue an agency-type distribution system which has helped its profitability.

AEG, one of the traditionally proud names of German electrical engineering, sold Telefunken to Thomson as part of its slimming down process in the wake of its financial troubles. Since meeting the terms of its court-supervised debt settlement agreement, AEG under Herr Heinz Duerr has been enhancing its technological position and building up its financial fortunes.

Steady path

In data processing, Nixdorf remains firmly on the path of expansion and by 1987 expects to have doubled its 1983 sales revenue of DM 2.7bn. It is expanding production capacity of Paderborn, Bray in Ireland and Singapore, and has steadily built up its distribution network internationally.

It has also expressed interest in possibly joining in semiconductor development and has held talks with RCA and LSI Logic of the U.S. LSI Logic recently decided to build a plant to make custom chips in Brunswick (where Toshiba of Japan already makes semiconductors).

Nixdorf has moved increasingly into the field of telecommunications, and Herr Heinz Nixdorf, the founder and company head, recently voiced his impatience with the Bundespost, the postal and telecommunications authority. He is a stern critic of the Bundespost's monopolistic influence and has also pressed for more rapid digitalisation of the telecommunications system.

The Bundespost is currently under review by a committee of inquiry to see whether it is matching up to demands on it in the present era of fast-changing technology.

With the merging of computer and telecommunications technologies, office equipment companies such as Triumph-Adler have been seeking to extend their interests further into data transmission. TA has streamlined its production of electronic typewriters and electronic components in the past few years.

More recently, it has its computer range and has built up a network of distribution and advisory centres in major cities for its computers and office systems.

TA, owned by Volkswagen, aims at a substantial reduction in losses this year, particularly now that its Perfec office computer operations in the U.S. have been moved off to Volkswagen of America.

TA aims to produce about 750,000 electronic typewriters from its Frankfurt and Berlin factories this year, compared with 531,000 last year and 393,000 in 1983. It claims to have won more than 30 per cent of the electronic typewriter market in West Germany and 20 per cent of the U.S. market.

Olivetti is the star of the industry

Advances in Italy

JAMES BUXTON
reports from Rome

ITALY has what is, by European standards, a relatively successful medium-sized electronics industry. It has a reasonable though declining trade surplus in electronic products. It has several companies which are, in different fields, among the Continent's leaders. And it has a population that shows itself able to adapt surprisingly quickly to technological change.

The successes of the industry are due almost entirely to individual companies, not to co-ordinated action by the Government. This means that where government initiatives are essential but lacking, as in the field of data transmission networks, there is a gap. The relatively low level of national spending on research and development also raises doubts as to how far the Italian industry can ever be a European leader.

The star of the Italian electronics industry is undoubtedly Olivetti. It is now the Continent's foremost European-controlled data processing equipment-maker, with sales of 1,200,000 units in 1984.

It is also one of the more progressive, and one of the highest-earning, companies, in absolute terms, in Italy.

Olivetti has transformed itself very quickly indeed over the past five years from what was predominantly a maker of mechanical and electro-mechanical office equipment. It has made use of a solid management base, with an excellent tradition of marketing, and has cleverly obtained know-how by acquisition of stakes in high-technology companies.

It has gained market shares in Europe, thanks in part to acquisition, and in late 1983 made a major agreement with AT&T of the U.S., whereby AT&T took 25 per cent of Olivetti and Olivetti obtained a major outlet for its M24 personal computer in the U.S.

Intention

The declared aim of Sig Carlo De Benedetti, Olivetti's luminous chairman and chief executive, who is undoubtedly Italy's most dynamic businessman, is to make Olivetti the credible European alternative to IBM. How far the company succeeds in fulfilling that ambition depends on its continuing ability to generate technological advances, especially in the field of software, on the success of its products in the U.S. market and on the acquisition of know-how from its U.S. partner, which has the right to take 40 per cent of Olivetti in 1988.

Whether or not other European countries, Britain for example, have several major companies in the field of data processing equipment, Olivetti is the only Italian-owned manufacturer of its kind in the country. The Italian market for personal computers is now growing very fast, after a fairly slow start earlier in the decade.

In 1984 the number of professional personal computers sold, more than doubled from 33,500 to 90,000 units. According to the PGP Market Research organisation, IBM accounted for about 30 per cent of the market,

Olivetti won 23 per cent and Apple about the same share.

According to ANIE, the Electronics Industry Association, Italian output of data processing equipment (which includes that of IBM Italia, whose total sales last year were L3,651bn) was L3,479bn, of which 58 per cent was exported. It was, by a short head, the biggest single sector in the Italian electronics industry.

The second biggest was telecommunications, with total output worth L3,358bn—but exports of only 12 per cent of that. The Italian telecommunications industry was a major victim of Government inattention in the 1970s. The manufacturers were hit by a dearth of orders from the Ministry of Posts and from SIP, the main telecommunications system slipped badly behind those of other European countries.

The foundations of a recovery were only laid in 1981 when the authorities were allowed to raise charges substantially and the main domestically-owned manufacturer, Sit—Siemens, was refounded as Italtel, and put under new management, led by Sr. Maria Bellisario.

It concluded an agreement with GTE of the U.S. and Telettra, the telecommunications offshoot of the Fiat group, to develop and manufacture a new family of digital exchanges, named Protel. The first exchanges of this type are now being installed.

Italtel is now a healthy company. It made profits both in 1983 and 1984—when it had sales of L1,129bn. Some 85 per cent of its sales revenue is from the sale of public telecommunications equipment. The bulk of the Italian state-controlled utilities.

Italtel has taken a lead in getting European manufacturers of switching equipment to standardise certain parts of their digital exchanges. Siemens, CII Alcatel and Plessey have all signed an agreement, though it could go further.

Given the underdeveloped state of digital switching in Italy, the Italian Government does not intend to open up the domestic switching market to companies that are not already represented in Italy. Those are Italtel and the subsidiaries of Ericsson and ITT.

The growth of telecommunications in Italy should get a boost in due course from two developments. One is the completion, early next year, of Itapac, a packet switching network for data transmission. At one stage it looked as if SIP, the state-controlled telecommunications utility which will manage the system, might form a joint venture to develop it with IBM or Olivetti. Now it looks more likely that agreements will be made with several different equipment suppliers for the value added networks connected to Itapac.

The other development is the forthcoming presentation of a draft law which would streamline the extraordinarily cumbersome structure of Italian telecommunications, transferring most powers from the ministry of posts to two companies, SIP and Italcable.

This simplification, when it comes, should make Italian telecommunications more efficient and increase the market for equipment and services.

The third sector of the

Italian electronics industry is the sector of electronic systems: the application of electronics to such uses as defence equipment, machine tools, postal sorting equipment and other equipment. This sector had turnover of L2,073bn in 1984, of which 46.5 per cent was accounted for by exports.

About 56 per cent of the sales of this sector are in the field of defence equipment. One of the major companies is Ragrupamento Sistemi (RSE), which designs and builds radar, missile systems, space equipment, electronic factory automation equipment, postal sorting machinery and other products. Contraves, the Italian offshoot of the Swiss concern, Oerlikon Buehrle, makes electronic equipment for detection of hostile forces, and weapons systems for defence of war ships against missiles.

Electronics, in which Plessey of the U.S. last year took a stake, is Italy's leading company in the field of electronic warfare—the detection or deceiving of enemy forces by means of electronics.

Italy has no less than five companies designing and building flexible manufacturing systems (FMS), electronically controlled factory systems. The main ones are led by Fiat's subsidiary, Omma, which has recently completed the world's most comprehensive automated plant for making car engines at Ternoli in south-east Italy, and has equipped the car assembly plants of Fiat Auto. The other companies in the sector are Olivetti's OCN (Olivetti Controlli Numerici), Mandelli, Saimp, which is part of the state-owned ENI group, and Elsas, part of RSE.

The existence of several companies in this field shows not only that Italy has traditionally strong Italian machine tools industry has advanced into completely new fields, but also that a large market exists in Italy for factory automation equipment.

Factors

This is not just because of the strength of the Italian motor industry—but because of two factors: the high cost of labour, which makes automation attractive, and the readiness of Italian managers to innovate, bringing a technological generation in the process if necessary.

In the field of systems electronics, as in other sectors of the electronics industry, alliances are being formed to achieve economies of scale and exchange know-how. Apart from Plessey's buying into Elettronica, it will eventually come to contribute Selenia has agreed to collaborate in the defence field with the British company Racal, and last year IBM Italia launched a joint venture with Elsas in the manufacture of factory automation equipment. IBM's first joint venture with a European company.

Ambitious plans for rationalisation of the factory automation equipment sector have so far come to nothing. Last summer there was serious talk of collaborative agreements between RSE and Comau, and between RSE and Olivetti Controlli Numerici, but nothing has happened between RSE and Comau, while earlier this year Olivetti announced that after nine months of talks it had been unable to reach an agreement between RSE and its own subsidiary.

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Snags follow over-rapid growth

The Nordic Countries

DAVID BROWN
in Stockholm

SCANDINAVIA'S largest electronic manufacturer is starting to feel the bite of industry giants in the increasingly competitive global personal computer and office automation market led by U.S. and Japanese manufacturers.

L. M. Ericsson, with annual sales of SKr 29.4bn and a worldwide workforce of 75,000, surprised analysts last year with a sharp drop in profitability after having predicted a 20 per cent rise in earnings from the SKr 1.76bn reached in 1983.

Results plummeted 10.7 per cent to SKr 1.57bn, due to heavy losses in its strategically crucial information systems business area which forced a major management shake-up.

Public telecommunications, the traditional core of the Ericsson empire, still generates 87 per cent of the group's profit despite intense efforts to quickly transform the company into a more broadly based electronics supplier.

Ericsson has a 15 per cent world market share with its six digital telephones switching technology, and has recently won a number of crucial new orders.

Significantly, these were won in collaboration with other manufacturers. They include a 210m contract for British Telecom (together with Thorn EMI

in the Thorn-Ericsson joint venture) and another deal worth some Fl 240m to supply the Dutch telecommunications system through its joint venture with American Telephone and Telegraph and Philips.

But the move into office automation has been fraught with troubles. Ericsson had hoped to lead the way in digital switching technology, coupled with its advanced private branch exchange (PBX) would give it a foot in the door of an estimated \$3.6bn world market.

But the PBX project was hit by component shortages and production snags last year, and the information systems unit plunged to an SKr 217m operating loss compared with profits of SKr 237m in 1983.

Many analysts attribute last year's problems to the group's over-rapid growth. Its acquisition of the Dallas-based terminals manufacturer in 1981 and the fact office equipment company in 1983 coincided with heavy development spending on the PBX, a new bank terminal system and a personal computer.

The breadth of the product range overstretch both management and financial resources. Moreover, the group has been forced to invest some SKr 4.5bn in fixed assets in an effort to remain technologically competitive with the industry giants. Yet it has had trouble passing on these higher costs in the competitive market-place.

The information systems division has been reorganised under a new management, and a major rationalisation scheme based on concentrating product and marketing programmes has

been instituted. These are expected to show results "during the latter part of the current year," says the company.

Among these moves, Ericsson has slowed its efforts to sell data terminals and personal computers to the U.S. market and has concentrated more heavily on the European. It has also disposed of its two power cable operations in North America.

Meanwhile, the group has introduced its new IBM-compatible personal portable computer, and an Alfascope 91 work-station. Ericsson already claims a 17 per cent European share of the terminal market, and continues to make substantial progress marketing mobile telephone systems.

Challenge

The Nordic region's second major force in the electronics sector is Nokia of Finland, the industrial conglomerate which is the country's largest privately-held company with annual sales of SKr 9.4bn and a workforce of 28,000.

The group has seen turnover in its electronics division climb 10-fold in the past decade to an annual \$800m. It is the largest microcomputer maker in Scandinavia, helped by its acquisition last year of Luxor and Salora.

Nokia's research and development spending makes up 17 per cent of turnover, with most of this being channelled into the electronics division where sales are expected to climb as much as 50 per cent this year.

According to Mr Yimmo

Koski, the unit's new president, the major challenge facing the group is to balance the need to achieve a competitive size against the difficulties of rationalising and managing its fast growth.

With heavy international competition, he says, the key to future expansion lies in international acquisitions and co-operation pacts. Like other Nordic manufacturers, the bulk of the group's sales are generated on foreign markets.

Most recently, Nokia entered a joint venture with the Tandy Corporation of the U.S. and the two companies have started production in South Korea of mobile cellular radio handsets.

It has also signed a four-year agreement to deliver terminals and workstations to Northern Telecom for an office system being marketed in Europe.

The group's Mobira radio telephone unit failed last year to meet production targets and was said to have played an important role in the 15 per cent decline in group net profits to FMk 85.5m, but significant growth is forecast for 1985.

Norvik Data of Norway, meanwhile, has shown a strong development with 1984 pre-tax profits climbing 60 per cent to Nkr 230m on sales of Nkr 1.36bn. Paradoxically, the group complains that its high R and D spending has kept margins from jumping ahead to nearly 16 per cent.

The group has steered clear from the highly competitive personal computer market, and focused instead on military and office equipment sectors where it offers complete systems with integrated software.